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A MONTHLY JOURNAL. DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

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(INCORPORATED.)

Vol. X.

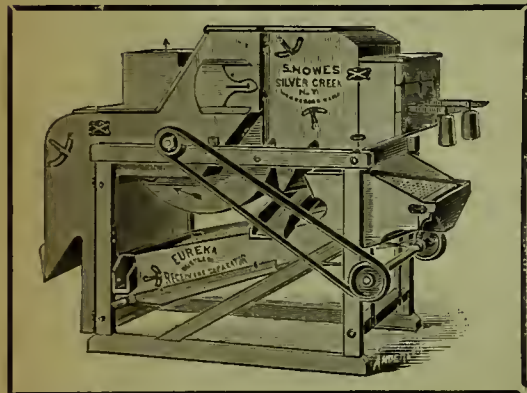
CHICAGO, ILLINOIS, MAY 15, 1892.

No. 11.

SUBSCRIPTION PRICE,  
ONE DOLLAR PER ANNUM.

## THE Eureka Grain-Cleaning Machinery

FOR ELEVATOR USE

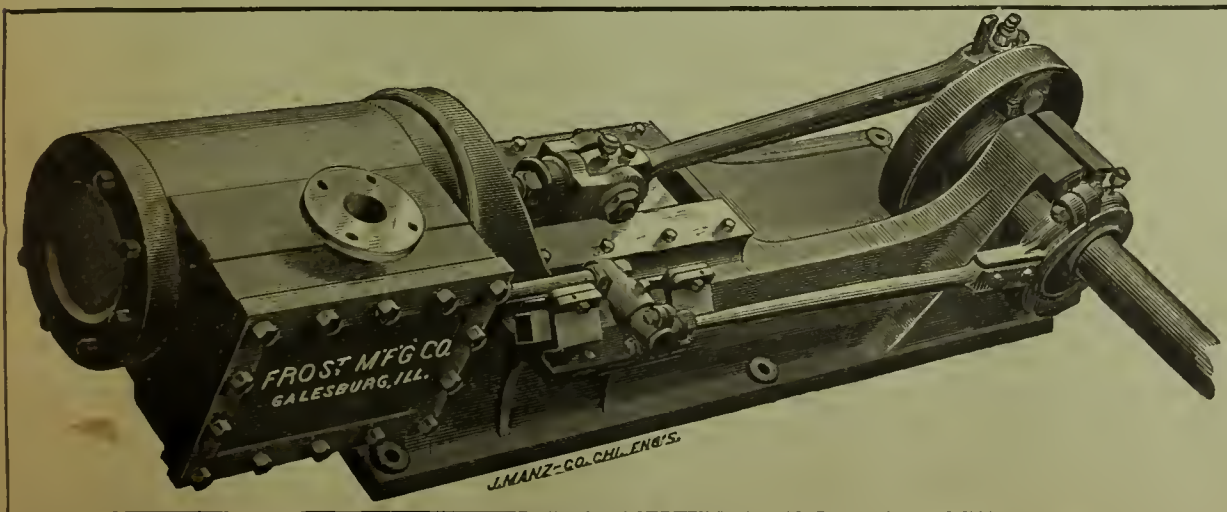


**COMPRISES** The Eureka Warehouse and Elevator Separator.  
The Eureka Double Receiving Separator.  
The Eureka Single Receiving Separator.  
The Eureka Aspirating Separator.  
The Eureka Corn Sheller, Dustless.

For Circulars, prices, etc., address

**S. HOWES,** SOLE MANUFACTURER, **SILVER CREEK, N. Y.**

CONVEYORS	+ + + Elevator Buckets. + + Elevator Boots. + + Elevator Bolts. + + +			BELTING
	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">   <b>"EXCELSIOR"</b>              RIVET           </div> <div style="text-align: center;"> <h3>THORNBURGH &amp; GLESSNER</h3> <h4>MILL AND ELEVATOR SUPPLIES</h4> <p>110 &amp; 112 SOUTH JEFFERSON STREET, CHICAGO, ILL.</p> <p>Elevating and Conveying Machinery a Specialty.</p> </div> <div style="text-align: center;"> </div> </div>			
	+ + + PULLEYS. + + + SHAFTING. + + + HANGERS. + + +			



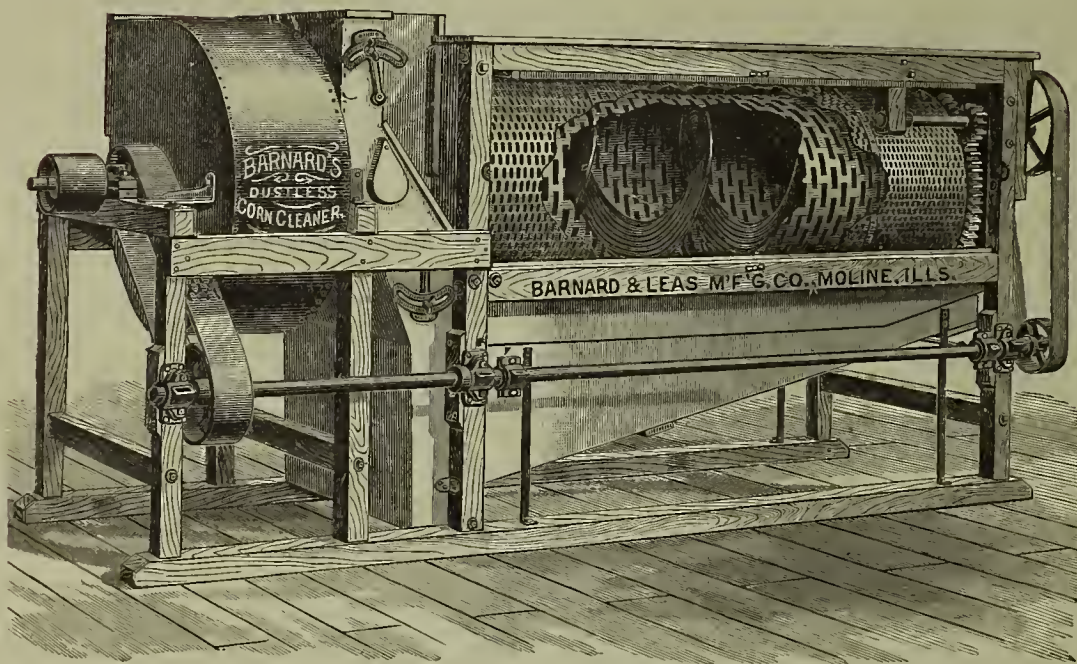
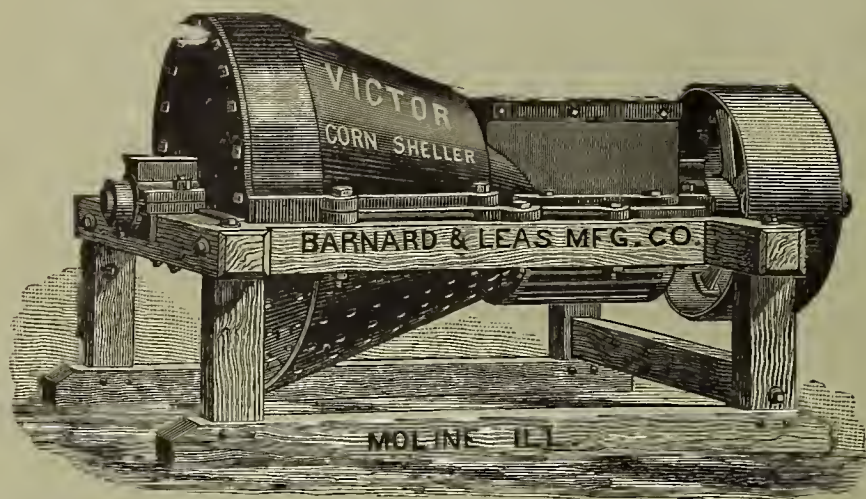
FOR PRICES AND DISCOUNTS  
— ON —  
**Elevator Machinery**  
AND SUPPLIES  
— OF —  
**EVERY DESCRIPTION,**  
ADDRESS EITHER STEAM OR HORSE-POWER,  
**The FROST MFG. CO.,**  
**GALESBURG, ILL**



AMERICAN ELEVATOR AND GRAIN TRADE.

# HERE IS THE BEST

Corn Sheller and Cleaner on earth. Be sure and send your orders to Barnard & Leas Mfg. Co., and get the best.



MANUFACTURED ONLY BY

**BARNARD & LEAS MFG. CO.,**  
**MOLINE, - - - ILLINOIS.**

— AGENTS —

**J. F. PAYNE,**  
Room 3, Chamber of Commerce, INDIANAPOLIS, IND.

**F. G. WALLACE,**  
Produce Exchange, TOLEDO, OHIO.

**JOHN SYPHERS,** Henderson, Ky.

**F. B. HOTALING,** Cor. E. Water and Grape Sts., Syracuse, N. Y.

**CHAS. E. MANOR,** Stanleyton, Page Co., Va.

**CHAS. KEMP,** Moroni, San Pete Co., Utah.

**WM. R. DELL & SON,** 26 Mark Lane, London, E. C., England.

**JOHN ABELL,** Toronto, Canada, Sole Manufacturer for the Dominion of Canada.

**M. M. SNIDER,**  
1323 Capitol Avenue, DES MOINES, IOWA.

**R. C. STONE,** Springfield, Mo.

**STUART HARE,** Enterprise, Kan.

**J. M. ALLEN,** Lisbon, North Dakota.



# THE EXCELSIOR DUSTLESS MACHINERY

WATKINS & CO., COMMISSION GRAIN,  
Chamber of Commerce,

PEORIA, ILL., June 14, 1891.

GENTLEMEN:—We have clipped to this date something like 500 carloads of oats with the No. 6 "Excelsior" Combined Clipper and Polisher we bought of you at an expense of only a very few dollars for repairs to replace clipping wallowers. The machine has always been entirely satisfactory to us. We have never had a car of oats go off grade through any fault of the machine. We are buying a great many oats clipped by the.....Clipper, and selling to same parties as those from your Clipper, and their oats have frequent claims made back on us.

Yours truly, WATKINS & CO.

BELLEVUE, IOWA, April 17, 1891.

GENTS:—Since purchasing our No. 5 Excelsior Combined Oat Clipper and Polisher of you in March, 1889, we have clipped and cleaned 150,000 bushels of oats, the loss in clipping averaging 6-10 of a pound per bushel, and we have always got the highest price for No. 2 grade oats, while we make no distinction as to quality in our purchasing, but all going to the same bin. This we consider one of the great advantages of a good Oat Clipper. We have always been well pleased with the machine. Repairs just purchased of you, amounting to \$15.00, is all we have had to pay.

Yours truly, REILING & CO.

HOLSTEIN, IOWA, April 10, 1891.

E. H. PEASE MFG. CO., Racine, Wis.

GENTLEMEN:—In regard to the No. 6 Excelsior Oat Clipper and Polisher, and Separator, I purchased of you last fall, I wish to say that it is highly satisfactory and surpasses my best expectations. I have polished about 150,000 bushels of barley with it, and it does this work very evenly, and does not break nor hull the grain. I am now running it on oats that test 28 pounds to the bushel, and raise them up to 33 and 34 pounds, with a shrinkage of not more than 3 ounces to the bushel.

I hesitated some before buying, but now that I know what it will do, I would not be without it for many times its value.

Yours respectfully,  
Signed, F. S. MANSON.

CHICAGO, ILL., Feb. 24, 1891.

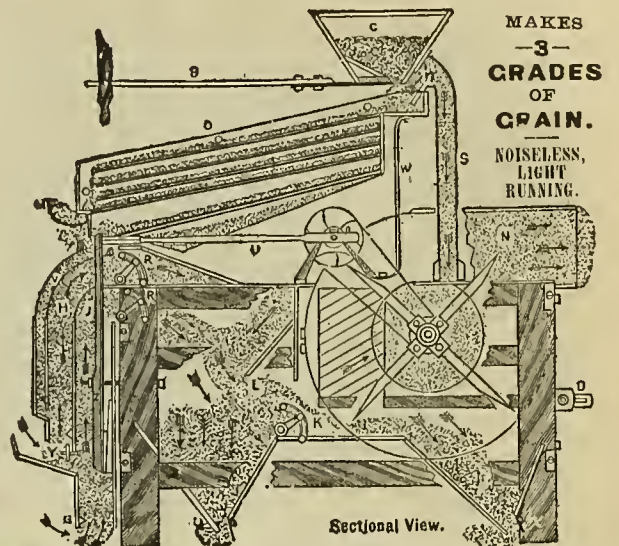
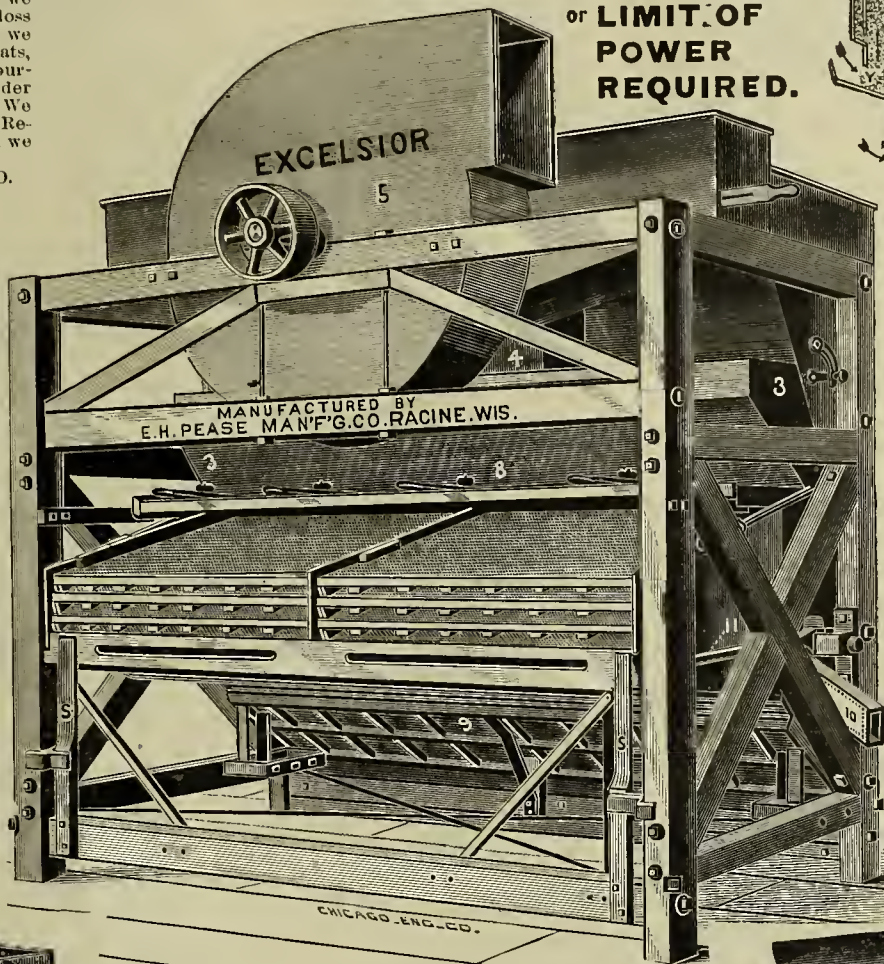
DEAR SIR:

The two No. 8 Excelsior Jr. Oat Clippers we bought of you in June, 1890, are giving splendid satisfaction. We experience no difficulty in raising the weight of oats from 8 to 10 lbs. to the measured bushel. On the 12th inst. we run through the two machines a large lot of very foul No. 3 white oats, testing 27 pounds to the measured bushel, and raised them to a fine, bright quality of No. 2 oats, testing 37 pounds; shrinkage 500 pounds to 1,000 bushels. The shrinkage being largely "hulls," and being separated from the dust, can be utilized in making ground feed.

On the 18th inst. we run 4,500 bushels of oats through in 3 hours, and raised them from No. 3 white, testing 29 lbs., to No. 2, testing 38 lbs.

Yours truly,  
COLUMBIA ELEVATOR CO.,  
J. E. CAILEY, Sec'y.

HAS NO SUPERIOR IN POINTS OF  
CONSTRUCTION,  
DURABILITY,  
EXCELLENCE OF WORK,  
STILLNESS OF RUNNING,  
or LIMIT OF  
POWER  
REQUIRED.



"Excelsior" Dustless Separator and Grader.

—FOR—

SEPARATING, CLEANING AND GRADING  
WHEAT FOR MILLING.

OR ANY KIND OF GRAIN FOR  
MERCHANTABLE PURPOSES.

MADE IN 4 SIZES.

CAPACITIES, 150 TO 800 BUSHEL PER HOUR.

CEDAR RAPIDS, IA., Dec. 19, 1890.

GENTS:—The No. 8 EXCELSIOR OAT CLIPPER, SEPARATOR, GRADER AND POLISHER COMBINED, bought of you in January, 1890, is still doing business at the old stand, and giving as good satisfaction as ever. We are now using it to polish barley and it is giving good satisfaction.

Yours truly,  
MINER & MORGAN.

## "Excelsior" Dustless Elevator Separator.

FOR ALL KINDS OF  
GRAIN OR SEEDS.

MADE IN 4 SIZES.

CAPACITIES, FROM 300 TO 2,000 BUSHEL PER HOUR.

HAS LARGE SIEVE SURFACE, POWERFUL  
FAN AND PERFECT VENTILATION.

GRAIN SHOE IS COUNTER-BALANCED BY  
COUNTER-BALANCE SPRINGS.

THE SMOOTHEST

—AND—

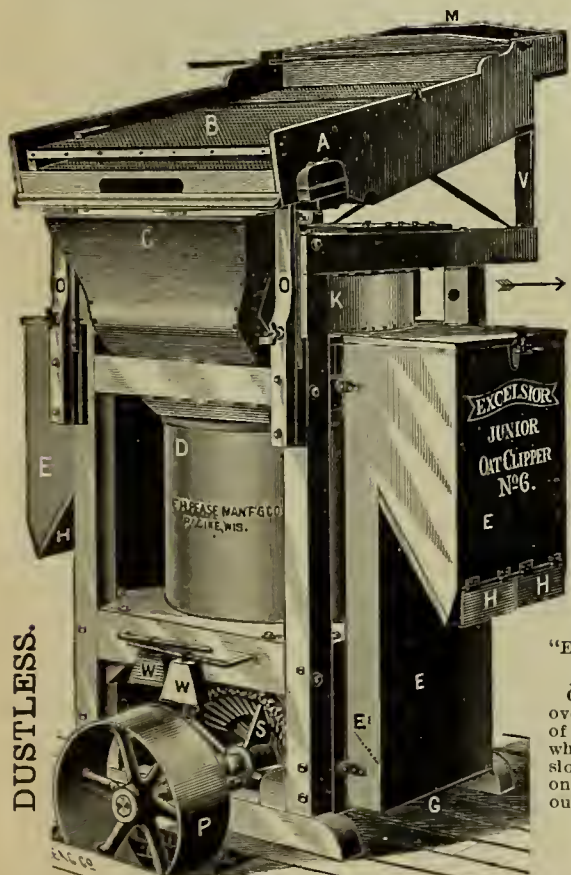
LIGHTEST RUNNING SEPARATOR  
IN THE MARKET.

"ELEVATOR B."

LA CROSSE, WIS., Nov. 6, 1890.

GENTLEMEN:—Have just made a Test Run of Flax over the No. 2 Excelsior Receiver Separator of 775 bushels per hour without crowding. Of course, when flax is very dirty it would require more attention or slower feed. We are very much pleased with the machine on flax and timothy. It adds one-half to the capacity of our flax reels and of our timothy mills.

Yours respectfully, W. B. CLISBY,  
Foreman for W. W. CARGILL & BRO.

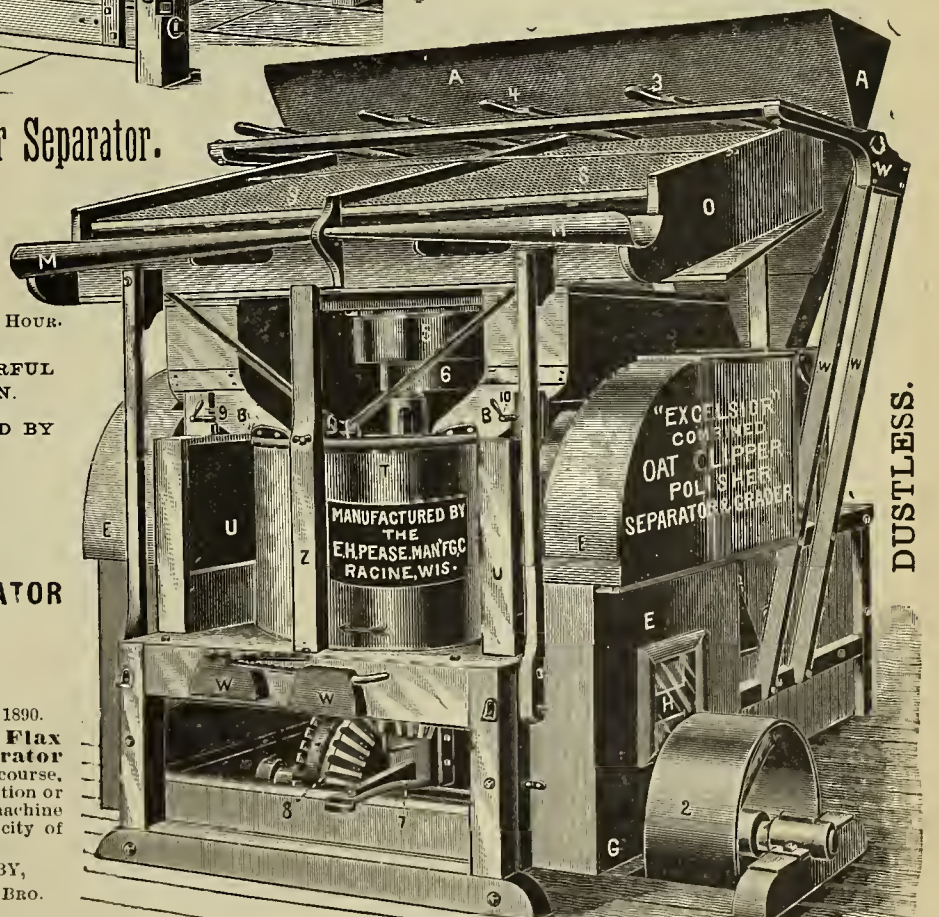


"EXCELSIOR, JR." OAT CLIPPER, POLISHER and SEPARATOR  
FOR CLIPPING, POLISHING, SEPARATING AND  
CLEANING OATS.

OR MAY BE FURNISHED WITH SIEVING, ETC.,  
FOR POLISHING, CLEANING, SEPARATING AND  
GRADING WHEAT OR BARLEY.

MADE IN 2 SIZES. CAPACITIES, 250 TO 600 BUSHEL PER HOUR.

SEND FOR  
CATALOGUE  
AND  
PRICES  
—TO—



"EXCELSIOR" OAT CLIPPER, SEPARATOR AND GRADER COMBINED;

ALSO POLISHER, SEPARATOR AND GRADER COMBINED.

THIS "COMBINED" MACHINE May be fitted to fill any or all the capacities of a GENERAL DUSTLESS ELEVATOR RECEIVING SEPARATOR for all kinds of Grain;  
OR AS A CLIPPER, CLEANER, POLISHER, SEPARATOR and GRADER OF OATS.  
OR AS A POLISHER, SEPARATOR, CLEANER and GRADER of Wheat and Barley.

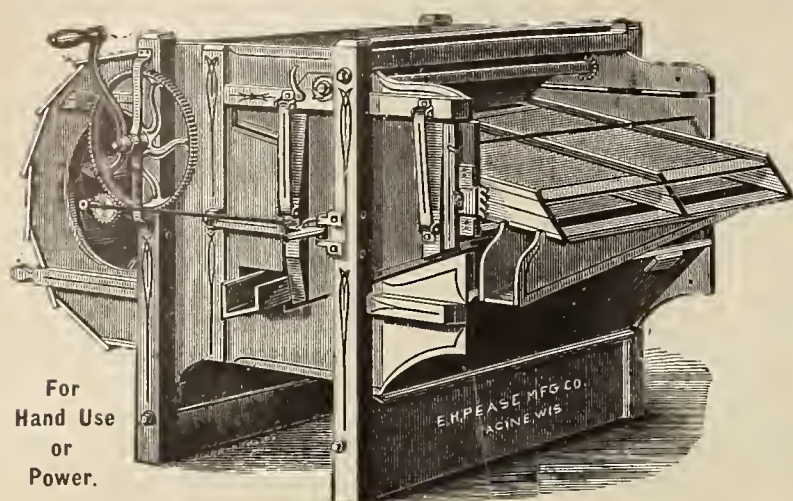
MADE IN 3 SIZES, WITH CAPACITIES FROM 150 TO 750 BUSHEL PER HOUR.

# E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

SEE PAGES 354, 355, 356, 357.



# PEASE WAREHOUSE FANNING MILLS.



For  
Hand Use  
or  
Power.

## The "Pease" Side Shake Mills.

The Cut shows the "Right," or Crank side. On the opposite side are tight and loose Pulleys. These mills are not only a first class mill for general work but are also specially adapted for all kinds of seed cleaning as is attested by the following unsolicited letter, which we publish by permission:

E. H. PEASE MFG. CO., Racine, Wis.:

Gentlemen:—We have started the No. 2 Mill which we bought from you a short time ago. We find it to be the best Timothy Cleaner we ever saw. It cleans very fast and does fine work. It is far ahead of the mill for cleaning timothy. We also use a mill, but it does not come up to the No. 2 side shake we bought of you. Your No. 2 will clean timothy about three times as fast as the mill does, and does better work than the — does. Your mill is well built and strong. We would not give our No. 2 "Pease" Side Shake for any two — that we ever saw.

ST. CHARLES, MINN., April 12, 1890.

J. B. ZECHES & CO.

NOTE—The No. 0 machine is not fitted to run by hand power.

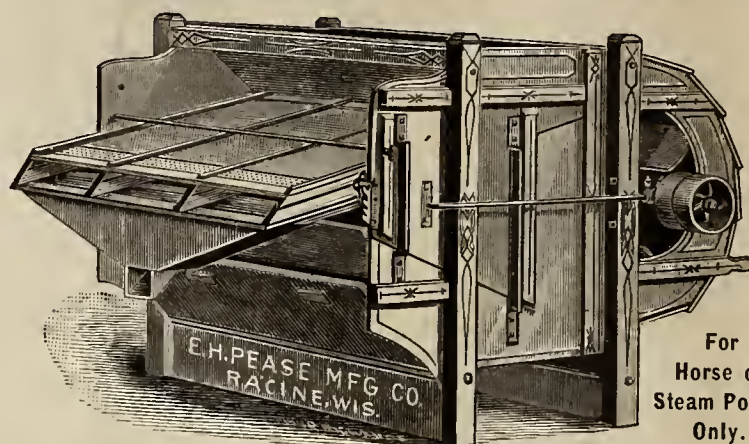
	No. 3.	No. 2.	No. 1.	No. 0.
Extreme Height.....	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.
Size over all.....	5 ft 2 in. x 3 ft 4 in	5 ft. 2 in. x 4 ft.	5 ft 2 in x 4 ft 9 in	5 ft 2 in x 5 ft 9 in
Floor to center of pulley.....	25½ in.	25½ in.	25½ in.	25½ in.
Driving pulleys.....	6 in. x 2 in.	6 in. x 2 in.	6 in. x 2 in.	6 in. x 3 in.
Revolutions per minute.....	275	275	275	275
Size of hurdles.....	2 ft. 6 in. x 24 in.	3 ft. 2 in. x 24 in.	4 ft. x 24 in.	5 ft. x 24 in.
Capacity per hour.....	100 to 200 bu.	125 to 250 bu.	175 to 350 bu.	250 to 450 bu.

HAVE  
THE  
LARGEST  
SALES

OF  
ANY  
MADE  
IN  
THE

UNITED

STATES



For  
Horse or  
Steam Power  
Only.

## The "Pease" End Shake Mills.

Particularly adapted for use in Horse Power Elevators where power is limited and close cleaning and grading desired. It is strong, durable and noiseless.

The shoe is supported by STEEL springs, hung from above and vibrated by flexible shake-rods with ADJUSTABLE ECCENTRICS. The shake is from front to back, instead of from side to side.

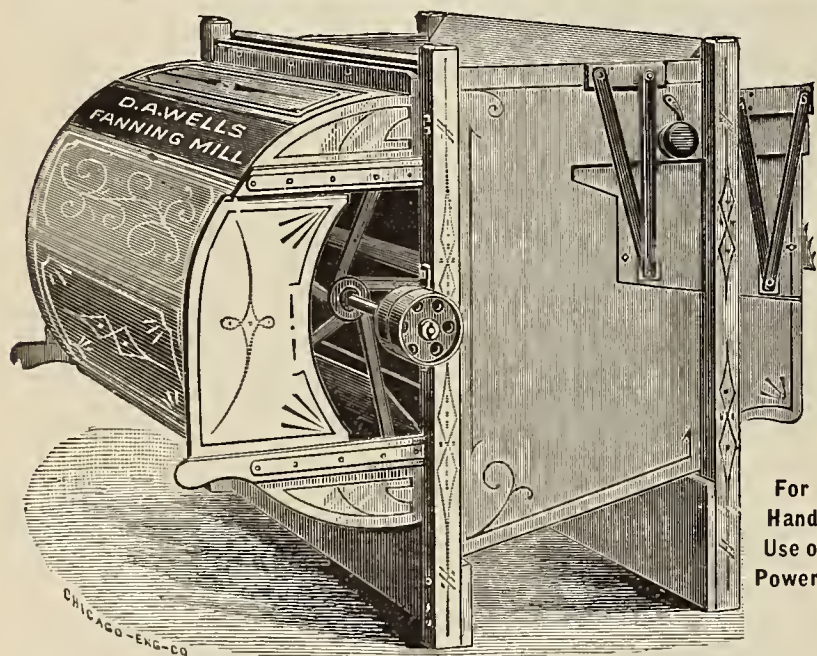
They are fitted with a patent adjustable hopper raiser, not shown in cut, which gives an even flow of grain upon the sieves.

These Mills have MUCH GREATER CAPACITY than any other kind of equal sizes. They are especially adapted for cleaning ALL KINDS OF GRAIN. The side shake Mills are better adapted for cleaning Clover, Timothy, Flax, etc.

NOTE—The pulleys are placed on the RIGHT side of mills or opposite to those showing in this cut, unless otherwise ordered.

	No. 3.	No. 2.	No. 1.	No. 0.	No. 00
Extreme Height.....	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.
Size over all.....	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.
Floor to center of pulley.....	3 ft. 3 in.	3 ft. 11 in.	4 ft. 8 in.	5 ft. 8 in.	6 ft. 8 in.
Driving pulleys.....	25½ in.	25½ in.	25½ in.	25½ in.	25½ in.
Revolutions per minute.....	6 in. x 2 in.	6 in. x 2 in.	6 in. x 2 in.	6 in. x 3 in.	6 in. x 3 in.
Size of hurdle.....	450	450	450	450	450
Capacity per hour.....	2 ft. 6 in. x 30 in.	30 in.	4 ft. x 30 in.	5 ft. x 30 in.	6 ft. x 30 in.
	125 to 250 bu	150 to 300 bu	200 to 400 bu	250 to 500 bu	300 to 600 bu

THESE MACHINES CAN BE FURNISHED WITH SPECIAL SIEVING TO HANDLE ANY KIND OF GRAIN OR SEEDS.



For  
Hand Use or  
Power.

## The "D. A. Wells" Warehouse Fanning Mill. WARRANTED

To clean CORN or OATS at the rate of 800 to 1,000 bushels per hour with the equal of ONE MAN POWER. Sold SUBJECT TO TRIAL. SATISFACTION GUARANTEED!

Designed for locations where power is limited and rapid cleaning is more of an object than close grading.

They have a much larger capacity than our "Pease" Warehouse Mills, but having a larger fan, do not require as high a motion and consequently require less power.

These mills are famous as corn and oat cleaners, where plain elevator work is required, and to be done rapidly.

The sieves are so arranged that they may be put in place or taken out independently, thus enabling the operator to quickly arrange any combination that may be required for the various kinds or conditions of grain to be cleaned.

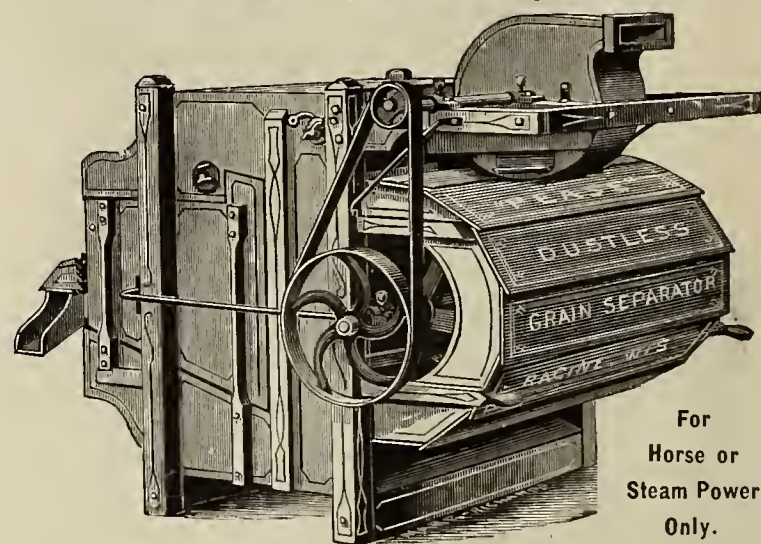
Extreme height.	Size over all.	Floor to center of pulley.	Driving pulleys.	Rev. per minute.	Size of sieves.	Capacity per hour on corn or oats.	Weight.
4 ft. 1 in.	5 ft 6 in x 6 ft.	2 ft. 3 in.	6 in x 2 in	140	57 in. x 26 in.	800 to 1,000 bu.	425 lbs.

WE  
ARE  
HEADQUARTERS  
FOR  
ALL KINDS  
OF  
MOTIVE POWER  
MACHINERY,  
FITTINGS,  
SUPPLIES AND  
REPAIRS

FOR  
GRAIN  
ELEVATORS,  
AND  
MILLS.

—O—  
SEND FOR  
GENERAL  
CATALOGUE  
AND PRICES  
—TO—

## The "Pease" Dustless Separators.



For  
Horse or  
Steam Power  
Only.

CHICAGO, ILL., April 8, 1891.

GENTLEMEN:—The "Pease" Dustless Separator I bought of you March 26, 1891, I sold to Wittman & Co., 66 and 68 N. Halsted St. The No. 00 Machine I bought of you January 19, 1891, I sold to F. Grimsell, 80 W. Erie St., and one I bought of you some time ago I sold to Keifer Bros., North Ave. and Halsted St. These and several others of these "Pease" Dustless Separators I have bought of you are being used chiefly for cleaning corn and oats, and any of them will clean as fast as 8x5-inch buckets, placed 12 inches apart and running at the usual speed, can elevate.

All the machines are giving good satisfaction.

Yours, etc.,

R. D. HILDRETH, Millwright,  
53 and 55 So. Jefferson St.

SPIRIT LAKE, IOWA, May, 7, 1891.

GENTLEMEN:—Inclosed find draft to pay for the No. 00 "Pease" Dustless Separator just received from you to take the place of the — Separator. Day before yesterday we put the mill in place, and have been running it on some odd jobs, and the Separator works to our entire satisfaction. The Dustless Fan and Conductor works splendidly, carrying out everything I want it to, and I can put the suction on stroug enough to take out grain if I desired. I can regulate the machine just as I want to, and am just more than pleased with it.

Yours truly,

D. L. RILEY.

	No. 3.	No. 2.	No. 1.	No. 0.	No. 00.
Extreme Height.....	5 ft. 2 in.	5 ft. 2 in.	5 ft. 2 in.	5 ft. 3 in.	5 ft. 7 in.
Size over all.....	5 ft 9 in. x 3 ft 5 in.	5 ft 9 in. x 4 ft 5 in.	5 ft 9 in. x 5 ft 5 in.	5 ft 9 in. x 6 ft 5 in.	5 ft. 9 in. x 9 ft 3 in.
Height to where grain enters.....	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.
Floor to center of pulley.....	2 ft. 3 in.	2 ft. 3 in.	2 ft. 3 in.	2 ft. 3 in.	2 ft. 3 in.
Driving pulleys.....	6 in. x 3 in.	6 in. x 3 in.	6 in. x 3 in.	6 in. x 4 in.	6 in. x 4 in.
Revolutions per minute.....	450	450	450	450	450
Size of hurdles.....	2 ft. 6 in. x 30 in.	30 in.	4 ft. x 30 in.	5 ft. x 30 in.	6 ft. x 30 in.
Capacity per hour.....	125 to 250 bu	150 to 300 bu	200 to 400 bu	250 to 400 bu	300 to 600 bu

# E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

SEE PAGES 353, 355, 356, 357.



# THE MOST SUCCESSFUL FLAX CLEANERS IN THE WORLD!

## FLAX, TIMOTHY AND CLOVER CLEANING.

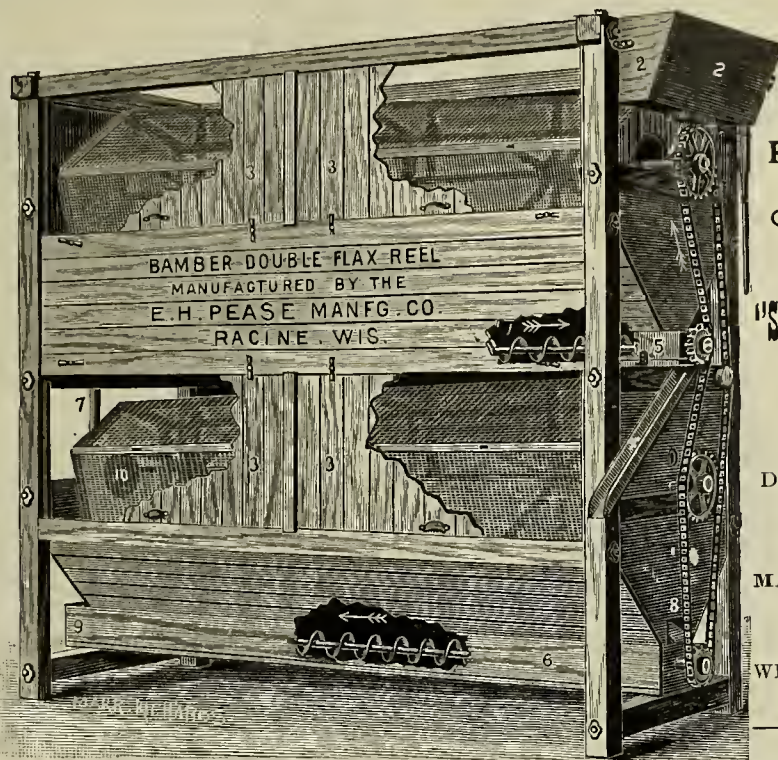
Dear Sirs:—We are using one of your No. 2 EXCELSIOR Dustless Elevator Separators (see page 317 of this paper) as a "scalper" for Flax, and easily run 750 bushels per hour through it. Much of the flax is thus reduced below six per cent. and run directly to our shipping bins. We also have one of your QUADRUPLE Flax Reeling Machines with which we clean rough flax down to two and one-half per cent. at the rate of 300 bushels per hour. We always overcrowd the reels so as to increase their capacity and thus run some flax into the "tailings" which we reclean at our leisure. Of course we should not waste any flax into the tailings and would reduce the flax to better per cent. if we did not crowd the "Feed" on our reels so hard. **We consider the outfit hard to beat.** We also use the Separator to scalp timothy and clover, thereby **DOUBLING** the capacity of our seed cleaners.

Yours truly,

W. B. CLISBY, Foreman,  
W. W. CARGILL & BROS.,  
Elevator "B"

LA CROSSE, WIS.,  
Aug. 31, 1891.

STRAIGHT OR TAPERED  
HAND REELS OF ANY DIMENSIONS  
DESIRED, MADE TO ORDER.



Two feet of capacity length for each lineal foot of machine.

**Tapered, Hexagon Reels. Revolving on Horizontal Shafts.**

All Sprocket Wheels and Drive Chain run perpendicular and parallel with each other.

The lightest running, best made, most durable reels in the market.

Can "Clothe" them with { "BLACK" OR "TINNED" WIRE-CLOTH,  
PERFORATED ZINC, OR  
PERFORATED SHEET STEEL.

MADE  
WITH  
ONE,  
TWO or  
FOUR

REELS  
IN A  
CHEST  
AND  
with or without  
"SCALPING-SHOE"

REELS  
OF ANY  
DESIRED STYLE  
OR  
DIMENSIONS  
MADE TO ORDER.

WRITE FOR  
PARTICULARS.

## HOW IS THIS?

## A FIVE YEARS' RECORD!

MINNEAPOLIS, MINN., Nov. 28, '91.

GENTLEMEN:—The QUADRUPLE FLAX REELING MACHINE you shipped us here for ELEVATOR "K" belonging to E. P. Bacon of Milwaukee has been running in good shape a month, and is giving perfect satisfaction.

We also have one of your machines of same style and size that has been running in this cleaning house about five years, which we like equally as well.

With either machine, WE CLEAN ROUGH FLAX DOWN TO ONE PER CENT. at the rate of 175 BUSHELS PER HOUR.

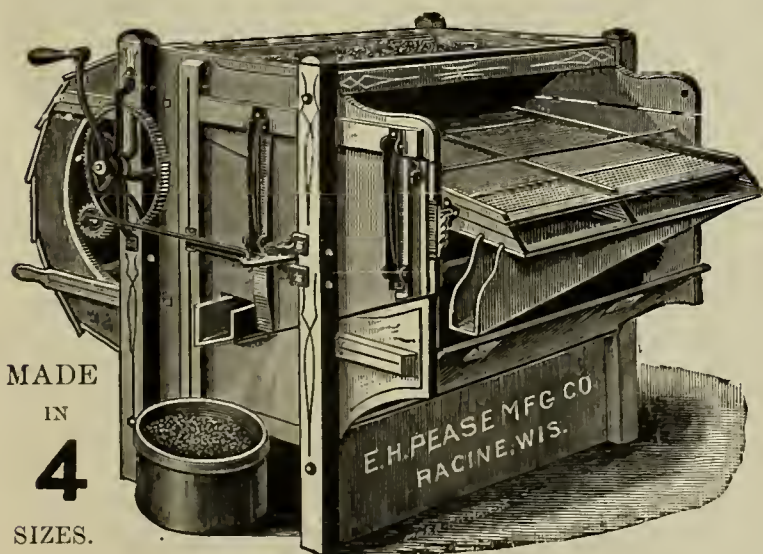
Have never seen another as perfect machine for RAPID AND PERFECT FLAX CLEANING. It is a pleasure to recommend your machines, as they are perfect and require little power or attention.

Yours truly,

E. G. TERWILLIGER,  
Supt. Elevator "K."

## OUR "PEASE" SPECIAL FLAX MILLS —ARE— FAMOUS FLAX CLEANERS

FOR SEED FLAX, OR COMMERCIAL CLEANING.  
FOR COUNTRY GRAIN HOUSES.



MADE  
IN  
**4**  
SIZES.

FOR HAND USE OR POWER.

This mill is represented with a Grain Hurdle in the Shoe, to show that although especially adapted to Flax Seed Cleaning, it can also be used for all kinds of Grain, making it a universal mill, calculated for all kinds of work. This mill is built upon the same principle as our Side Shake Warehouse Mills, but with more depth of the shoe, in order to accommodate deeper sieves, and a flax screen extending to the extreme front of the mill, a length of four feet. It consequently has greater capacity than any ordinary mill in existence. No flax hurdles are used, as separate sieves work better on flax seed, and afford opportunities for changing the combinations for different classes of work. This mill is equally well adapted to cleaning, separating and screening Timothy, Clover, and other fine seeds.

## LOOK HERE!

THIS IS ONLY A PARTIAL LIST OF

## LARGE FLAX HANDLERS

WHO HAVE **ADOPTED** AND ARE EACH

USING FROM ONE TO SIX OF OUR FLAX REELING MACHINES,

—VIZ:—

ALBERT DICKINSON SEED CO.,  
MINNESOTA ELE. CO., (Armour & Co.),  
CHAS. COUNSELMAN & CO.,  
W. L. LUCE (South Elmhurst Elevator),

**CHICAGO.**

E. P. BACON & CO., MILWAUKEE.

**MINNEAPOLIS:**

INTER-STATE GRAIN CO.,  
E. P. BACON, ELEVATOR "K"  
STRONG & MILLER.  
EMPIRE ELEVATOR CO.  
BAGLEY ELEVATOR "X".

WINONA MILL CO., Mankato, Minn.

NESS & MOEN, Peterson, Minn.

CARGILL & BRO., La Crosse, Wis.

INTER-STATE GRAIN CO., Oelwein, Iowa.

STOKES BROS., Watertown, S. Dak.

SAMUELSON & CO., Stromsburg, Neb.

J. C. SANBORN & SON, Ortonville, Minn.

W. H. STIPP, State Center, Iowa.

CLARK BROS. & CO., Manson, Iowa.

S. J. CLAUSEN, Clear Lake, Iowa.

GRAY, BABCOCK & SEARS, Ida Grove, Iowa.

THOS. KOLTIS & CO., Radcliffe, Iowa.

BOOR & BENJAMIN, Ashton, Iowa.

D. C. FAIRBANKS, Dodge Center, Minn.

BARLOW & LAWRENCE, Thornton, Iowa.

J. E. KNUDSON, Mason City, Iowa.

MITCHELL BROS., Manley, Iowa,

AND MANY OTHERS.

# E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

SEE PAGES 353, 354, 356, 357.



# THE MOST SUCCESSFUL

## MOTIVE POWER EVER INVENTED

### FOR

# COUNTRY GRAIN ELEVATORS

HERE YOU HAVE IT  
IN A "NUTSHELL".

E. H. Pease Mfg. Co.

DEAR SIR:—We have given The Seven Complete Outfits (7 Morton Powers and 7 outfits of Elevating Machinery), bought of you this season, a six weeks' trial and find them all perfectly satisfactory. I consider the Morton Tread Power superior to any other in use. We have taken in at a single house as high as 3,750 bushels per day and used two 900 lb. horses to do the work, and at the same time loaded out 6 large car loads. Yours truly,

WINONA MILL CO.,  
Per W. F. PARKER,  
Auditor and Builder.

WINONA, MINN., Oct. 24, 1891.

Above Company now (4-8-92) have 9 of these Powers.

WE ARE...

SOLE  
GENERAL AGENTS

FOR  
THESE POWERS

AND  
HAVE PLACED STOCKS

FOR

Prompt Shipment

AT

RACINE, WIS.,  
MINNEAPOLIS,  
COUNCIL BLUFFS,  
KANSAS CITY,  
MUSKEGON, MICH.

ADDRESS

ALL LETTERS AND ORDERS

TO

E. H. PEASE MFG. CO., Racine, Wis., UNITED STATES.

SEE PAGES 353, 354, 355 and 357.

THE MORTON TREAD POWER



DESIGNED EXPRESSLY FOR GRAIN ELEVATORS.

Style No. 3. For 1, 2 and 3 Horses.

Speed of Main Shaft, 90 to 100 per Minute.

For houses where not more than one, two or three horse power is required, these powers are beyond controversy more economical and satisfactory motors for grain elevators than any steam or gas engine or other horse powers in the world.

THEY ARE THE MOST SUCCESSFUL

BECAUSE

THEY ARE WARRANTED to give as steady motion to the grain elevating machinery, or to grain cleaning machinery as any steam or gas engine of same rated horse power.

They are always ready for business at a moment's notice. There is no fire to build; no steam to get up; no engineer or driver required; no dangers from combustible fuels of any kind; no increased insurance rates; no fire risks.

Our Patent Automatic Governor is furnished with every Morton Power sold without extra charge, and can be regulated to run the power slower or faster in a moment's time. Should a belt "fly off" when power is operating at full speed and work, there will be no change of speed and no damage to power or horses.

IT IS THE ONLY POWER

having an adjustable "elevation" (on which the horses walk,) which is an important point of superiority, viz: By the mere turning of a crank, the operator can, at will, give more or less "pitch" to the elevation, thereby developing more or less power as work in hand requires, or lower same to a horizontal position to rest or feed the horses. This can be done when the horses are either on or off the power, without in any way effecting the "line" or the tension of the drive belt. It is the only Tread Power whose revolving platform (on which the horses walk) has a genuine cog-gear driving connection, with gears on either end of drive shaft, the "cogs" of which each consist of an anti-friction (and anti-wear) roller. It is the only Power having self-oiling traverse wheels and has 50 per cent. less traverse wheels and other wearing points, than any other tread power, and consequently is the most true, tight running and steady Horse-Power in the market.

This machine needs no attention (except occasional oiling), and can be stopped or started by a rope, having one end connected with brake-lever, and other end at most convenient place in office or grain elevator. The entire expense of this power when delivered, set up, connected and covered with suitable building, will not cost the purchaser any more than the cheapest "Sweep" Power and is vastly superior. SEE? It does not require one-quarter as large house as a "Sweep" Power.

HERE YOU ARE AGAIN!

E. H. Pease Mfg. Co.

DEAR SIR:—I am using a Morton Tread Power, Style No. 3, Two-Horse, bought of you a year ago, and am running my stand of elevators which is 34 ft. high, with 5x8 in. buckets, placed 12 in. apart on link-belt, with a 1,050 lb. horse and it has given me better satisfaction than I expected when I bought it. I can do more work than any claim the manufacturers have ever made for it. I can elevate 740 bushels of oats, or 500 bushels corn per hour, with one horse. Yours truly,

J. W. STROMBERG.

ROSCOE, IA., Oct. 26, 1891.

HERE IS A PARTIAL  
LIST OF

Recent Purchasers

FOR REFERENCE.

Winona Mill Co., Winona, Minn.,  
(9 machines).

M. D. Stevers & Co., Chicago.

C. W. McNoun, Burrton, Kan.

Barnard & Leas Mfg. Co., Moline, Ill.

Frost Mfg. Co., (many Powers),  
Galesburg, Ill.

Russell & Miller, Winneconne, Wis.

O. L. Marfield & Co., (many Powers),  
Winona, Minn.

Porter Milling Co., Winona, Minn.

Bingham Bros., (many Powers),  
New Ulm, Minn.

A. McMichael, Bryant, So. Dak.

A. F. Bornscheim, Brandon, Wis.

P. H. White, Credit River, Minn.

B. F. Uplinger, Kingston, Ill.

York Foundry and Eng. Co.,  
York, Neb., (many Powers).

J. A. Campbell & Son, Lincoln, Neb.

Geo. Zion, Yarmouth, Ia.

E. Burt, Shannon, Ill.

A. Thorp, Flagg, Ill.

Turner & Brenner, Marshall, Minn.

Fawcett Bros., Tacoma, Wash.

Peterson & Smith, Olds, Ia.

J. A. Carton & Co., Ackley, Ia.

McLaughlin & Son, Austin, Minn.

L. H. Neff, Groton, So. Dak.

Bender Bros. & Co., Spencer, Ia.

Logan & Sleeper, Sheldon, Ia.

S. Walters, Bruce, So. Dak.

AND

HUNDREDS  
MORE.

SOLE AGENTS

FOR THE

UNITED STATES.



# WE ARE HEADQUARTERS

For all kinds of **MACHINERY** and **SUPPLIES**  
FOR POWER TRANSMISSION, GRAIN ELEVATING AND GRAIN CLEANING,

## —FOR— Grain Elevators and Mills,

SUCH AS  
SHAFTING, PULLEYS, HANGERS,  
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,  
GEARS, SPROCKETS, SET COLLARS,  
TAKE-UP BOXES, CRANE SPOUTS,  
LEATHER, RUBBER, COTTON AND LINK BELTING,  
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS,  
ELEVATOR BOOTS, BUCKETS AND BOLTS,  
"SPIRAL" AND "BELT" CONVEYORS,  
"PLATFORM," "DUMP" AND "HOPPER" SCALES,  
GRAIN SCOOPS AND POWER GRAIN SHOVELS.

—ALL SIZES OF—  
**Farm and Warehouse Fanning Mills,**  
GRAIN TESTERS, SEED TESTERS,  
PERFORATED METALS, WIRE CLOTH,  
**Power Car Pullers, Oat Clippers, Dustless  
Receiving Separators.**  
POLISHERS, SEPARATORS, GRADERS,  
CORN SHELLERS, STEAM ENGINES, FLAX REELS  
AND SPECIAL FLAX MILLS, "OVERHEAD,"  
"SWEEP" AND "TREAD" HORSE POWERS,  
BAG-TRUCKS, SIX-WHEEL WAREHOUSE TRUCKS, ETC.

## CAS ENGINES OR STEAM

Capacity, 50 bushels per hour.

GRAIN TESTER.

E. H. PEASE MFG. CO. RACINE, WIS.

HERCULES  
STEEL SCOOP

PATD. SEPT. 29, 1881.

Grain and Seed Testing Scale.

GRAIN AND SEED TESTER.

If you don't  
SEE WHAT YOU  
WANT,  
ASK FOR IT.  
We have got it.

**E. H. PEASE MFG. CO.,**  
RACINE, WIS.

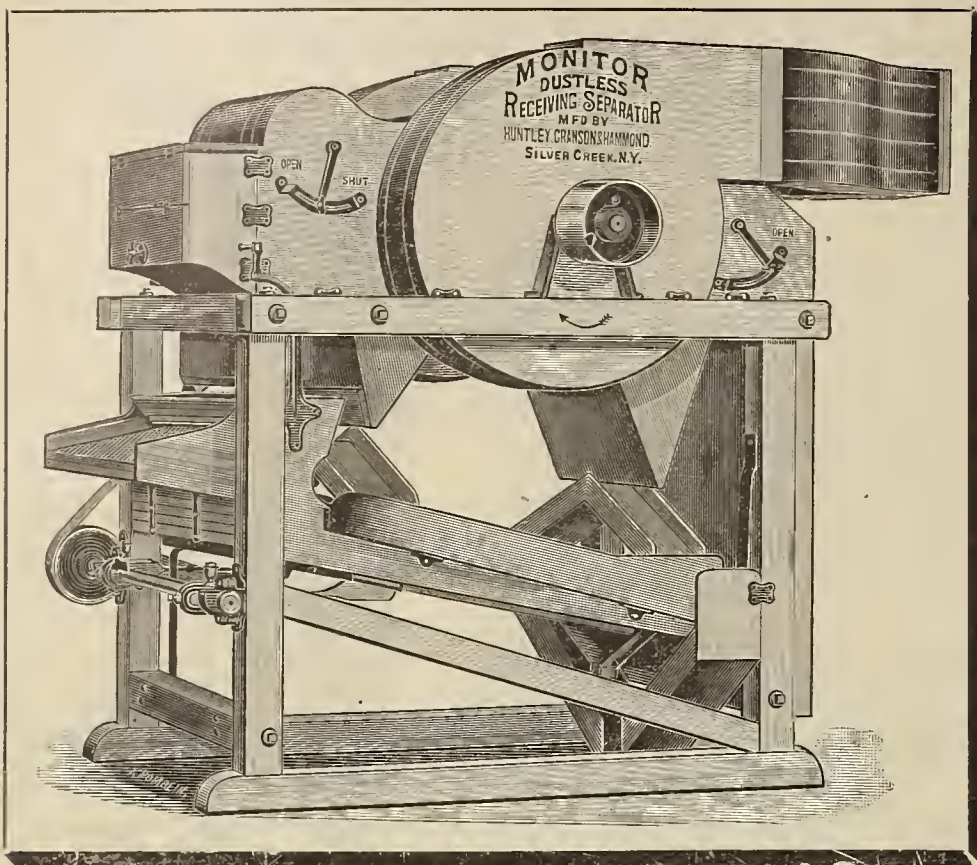
SEE PAGES 353, 354, 355 and 356.

**SAFEST,  
MOST DURABLE  
—AND—  
Powerful Puller  
ON EARTH.**

HANDLES  
15 to 20 Loaded  
Cars at once on  
STRAIGHT  
and LEVEL  
TRACK  
and pro-rata on  
GRADES  
and  
CURVES

"HERCULES" POWER CAR PULLER.





THE

# MONITOR SEPARATORS

3 Years—1,500 Sales.

## IDEAS.

"The six Monitor Separators give us complete satisfaction."

ANTHONY ELEVATOR CO., Minneapolis, Minn.  
March 8, 1892.

"Gives best satisfaction of any we ever used."

STRONG & MILLER, Minneapolis, Minn.  
Feb. 16, 1892

"We find your Monitor far in the lead."

GRAY MILLING CO., Standish, Mich.  
Feb. 15, 1892.

"Your No. 3 Monitor works to perfection."

NEILLSVILLE MFG. CO., Neillsville, Wis.  
Feb. 18, 1892.

"Your Monitors (No. 7) clean the grain quickly and thoroughly."

TREHERNE FARMERS' ELEV. CO., Treherne, Man.  
March 11, 1892.

"Superior to any Separator we ever used."

HUNTINGTON MILL CO., Huntington, Ind.  
Feb. 29, 1892.

"The best Separator we have ever used."

TAYLOR-HITZ CO., Madison, Ind.  
Feb. 15, 1892.

"Your machine is the best. We have had six months' trial and know."

I. M. YOST MILLING CO., Hays City, Kan.  
Feb. 18, 1892.

## FEATURES.

Perfect, positive feed.  
Uniform distribution.  
Entire controllability.  
Free accessibility.  
Reliable in capacity.  
Dustless in operation.  
Light in power consumption.  
Rigid in construction.  
Positive in all motions.  
Built and guaranteed for service.

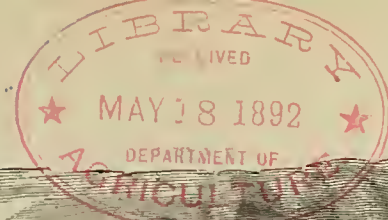
In each and every one of the above features the Monitor Separators admit of no competition. We are entirely willing that you should test the accuracy of our assertions. We back each one up strongly.

# HUNTLEY, CRANSON & HAMMOND, Silver Creek, N. Y.

WESTERN BRANCH:  
63 and 65 So. Canal Street, } **B. F. RYER,** Manager.  
CHICAGO, ILL.

**J. J. WALTERHOUSE,** Gen. Agt.  
Winnipeg, Manitoba.





A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY  
MITCHELL BROS. COMPANY,  
(INCORPORATED.)

VOL. X.

CHICAGO, ILLINOIS, MAY 15, 1892.

No. 11.

SUBSCRIPTION PRICE,  
ONE DOLLAR PER ANNUM.

### ELEVATOR AT MACOMB, ILL.

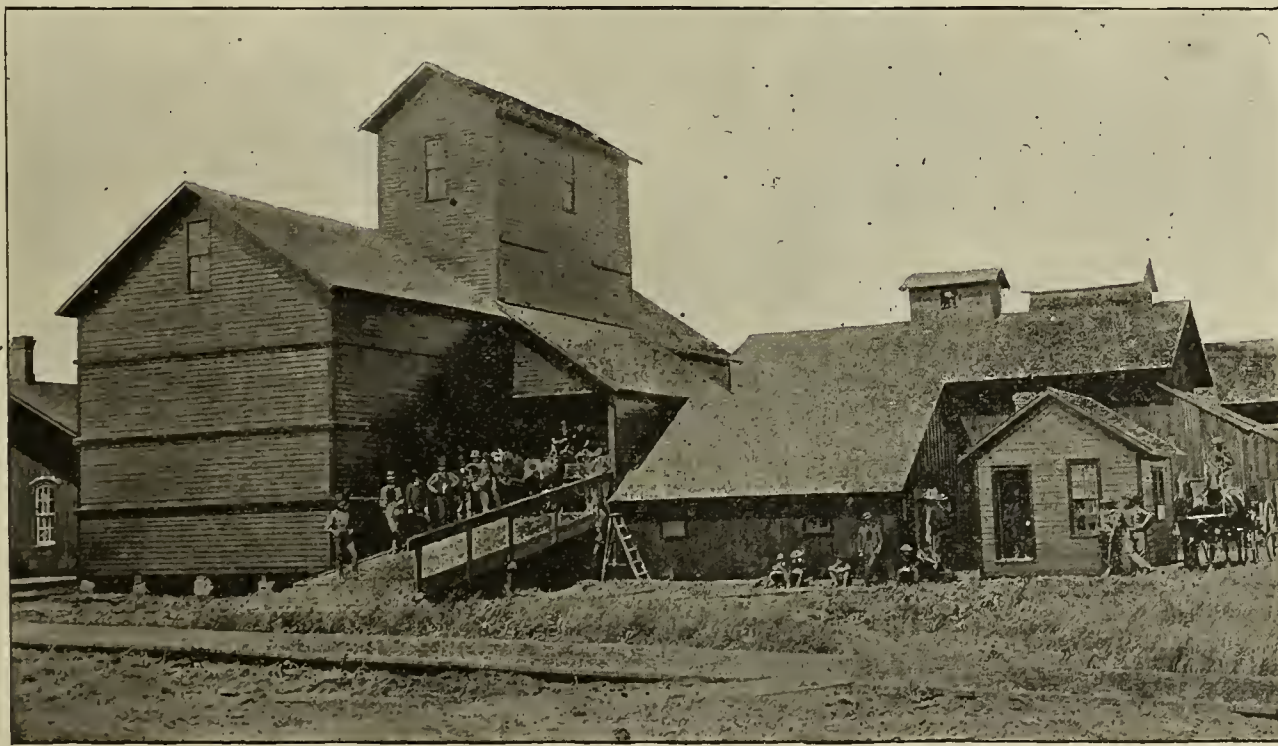
To own and operate a good elevator is the ambition of every country grain dealer. Flat houses are well enough where the receipts are small, but at points where much grain is received the elevator is much to be preferred for several reasons, the chief being economy of time and cost of handling. A flat house can be built at less expense for a given capacity; and being simple in its construction it can be put up by one having no exact knowledge of the various stresses caused by the shifting weights of grain in an elevator. In building elevators questions arise as to the proper arrangement of the machinery, very puzzling to the barn builder, who, having had little or no experience in this line, invariably makes a mistake in some one of the many points involved, and so makes a botch of the whole job. After the house has been operated for some time these defects show themselves, especially the faulty placing of machinery. Such a building can bear no comparison with an elevator which runs all the year without chokes, delays, slipping of belts, etc., and which has been planned with due regard to the correct placing of elevators and machines so as to save power, time and trouble, and do the work required satisfactorily.

Those expecting to build can easily satisfy themselves of the advantages of a well-built house by inspecting those in their neighborhood, and that many have done so is shown by the increasing number of high-class country elevators erected in recent years.

The cut given herewith represents the elevator of E. M. Duane & Co. at Macomb, Ill., which was built for them by The Heidenreich Company, engineers and builders of grain elevators of Chicago. The elevators in the background are owned by other grain dealers and were erected by the same company. A view of the driveway is given in the illustration, the railway track being on the opposite side of the house. Its storage capacity is 25,000 bushels, with a receiving and elevating capacity of 800 bushels per hour. Rubble stone was used for the foundation, laid in cement mortar. The bins are not cribbed,

but studded and rodded and covered on the outside with No. 1 ship lap and B siding painted with two coats in two colors of mineral paint, with a roof of first quality shingles.

Included in the machinery equipment are one six-ton wagon scale, a 60-bushel hopper scale, an E. H. Pease Dustless Separator, one double automatic wagon dump, and two elevator legs with 8x5 buckets on belts. The elevator boots are set in steel tanks to exclude water from the pit. A complete set of spouting is provided to reach all bins. All the machinery is driven by a double Samson Horse Power. The building was erected in only



ELEVATOR AT MACOMB, ILL.

twenty one days; but The Heidenreich Company built a duplicate of this house in the short space of fourteen days and seven hours for S. W. Allerton at Galesville, Ill.

Corn cobs are to be a special product of the farmers near Middletown, Del. They have agreed to plant a certain amount of the large cob corn for the New York Cob Company.

Iowa devoted 12,560,890 acres to cereals in 1890, against 11,490,795 acres in 1880. The increase was, in corn, 969,378 acres; oats, 2,244,564 acres; barley, 319,868 acres, and buckwheat, 8,925 acres; and the decrease in wheat acreage was 2,463,740, and in rye 8,900. While 7,585,522 acres were devoted to corn in 1890, only 585,549 acres were devoted to wheat.

### THE SPECULATOR NOT A PRICE DEPRESSOR.

While he is about it "Farmer Hatch" ought not to let slip by him the opportunity to legislate further for the benefit of the farmer than he proposes by his Anti-Option bill. He should try to provide in some way against rain, which sometimes floods the fields; sunshine, which occasionally wilts his crops, and winds, which have ere this wrought great havoc among his buildings and live stock. It is true that without rain his grain would not sprout, and in the absence of sunshine would fail to ma-

ture, while the strong wind often does good by clearing the atmosphere and thus preventing disease. If he should succeed in cutting off all selling of produce for future delivery, except where the produce is actually owned by the seller at the time of sale, he would hardly benefit the farmer more than if by the exercise of a supernatural power he prohibited the action of forces which sometimes cause blistering heat, flooded fields and damaging windstorms. If he wishes to gain an idea of the way in which an utter absence of what is called speculation would help the prices of grain and pork he might take a look at the current market prices for cattle and beef. They are notoriously low

as compared with hogs and hog product. Suppose he should ask some intelligent person the reason for this, and be informed that the seller of cattle is obliged to accept whatever figures are offered him by the men who purchase for slaughter or shipment, and that in the absence of any speculative competition for the product these buyers are now paying the lowest prices that have ruled in the last quarter of a century, while the price of hogs is kept up by the fact that large stocks of hog product are being carried by the speculative trade. These are conditions that will bear to be thought of by those who are inclined to vote for the Hatch bill in its present form.—*Chicago Tribune*.

Steady gains in a small way are more desirable than irregular winnings in a big speculative way.



### ANOTHER MOVE AGAINST THE ERIE CANAL.

Five years ago, says the *New York Commercial Bulletin*, an attempt was made by certain members of the state Legislature to secure the passage of a bill requiring the city of Albany to fill up the canal basin at the eastern terminus of the Erie Canal at Albany. As soon as the purpose of the bill became evident, such a protest against it was made that the matter was dropped. But now the scheme has been revived again, and bills with this purpose in view have already been advanced to third readings in both houses. Both bills were secretly introduced and referred to obscure committees, which at once reported them favorably. Should one of these bills become a law and be enforced, the canal would be sadly crippled. There is no doubt but that both emanate from the railroads, which have done all in their power to cripple the Erie Canal. They control the elevator trust at Buffalo, which diverts as much of the grain tonnage as possible from the canal to them; and they succeed from year to year in preventing the Legislature from appropriating sufficient funds for the improvement of our great waterway.

As a regulator of rates the canal is of immense importance, not only to New York, but to other seaboard cities as well. Rumors partly confirmed by some of the officials concerned are circulating, to the effect that the New York Central, Erie and Delaware & Hudson are arranging traffic agreements and amicable understandings to be brought about by an interchange of directory representation. Should this scheme be carried out there would practically be but three competitors in the grain traffic from the lakes to New York—the Reading interests, the New York Central-Erie interests and the Erie Canal. The importance of the canal will therefore become greater than ever.

### THROUGH GRAIN TRAINS ON SCHEDULE TIME.

The work of the AMERICAN ELEVATOR AND GRAIN TRADE and of the grain shippers who gave us for publication their experience and opinions on the abuses connected with the delay of grain shipments in transit has already borne good fruit, and one trunk line will hereafter run through grain trains from Chicago to the seaboard, which will greatly expedite grain shipments.

The Pennsylvania Railroad Company has just made an experimental movement of a through train of forty cars loaded with grain from Chicago to the East without change of engine or break in the train, which is a novel departure in the methods of handling this class of freight.

Under the old plan grain has been hauled to the East in freight cars attached to trains which carried other kinds of freight and merchandise destined to various points on the system. This arrangement involved great delay in the yards at terminal points on the line through the frequent shifting of cars and an enormous amount of handling. In order to obviate these difficulties and to expedite the shipment of the vast stores of grain to the seaboard, the Pennsylvania Railroad Company determined to institute a complete service of through grain trains.

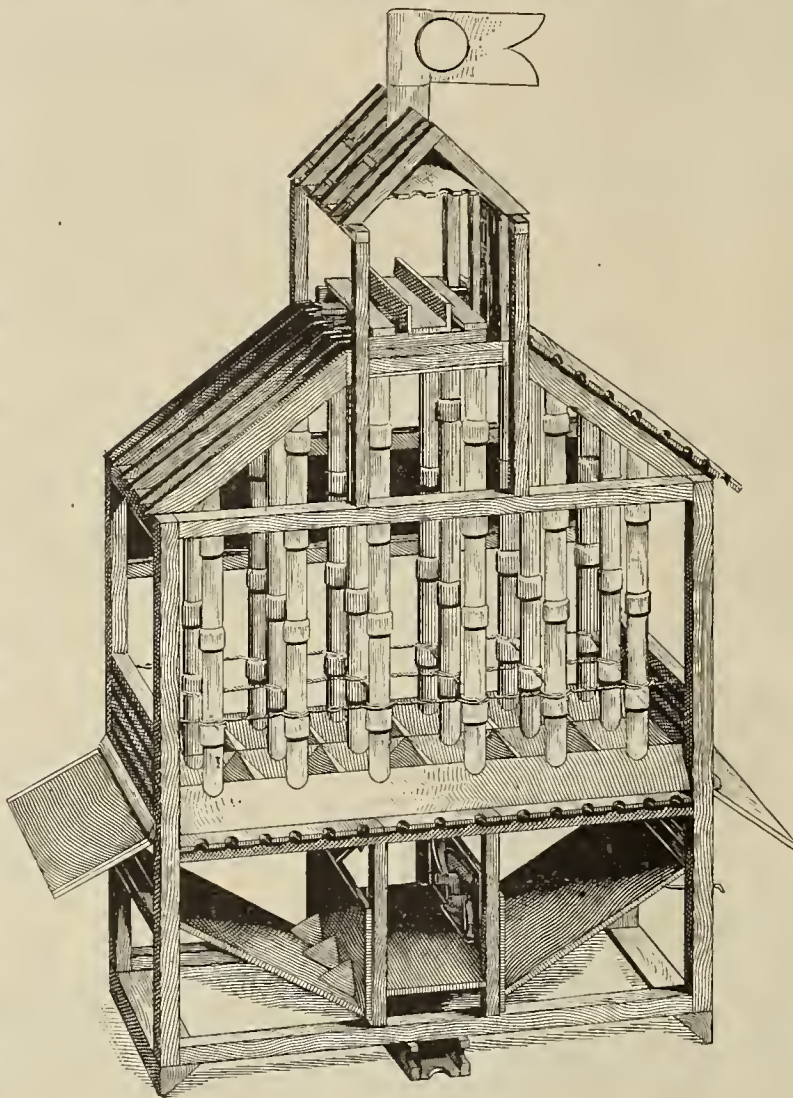
The first train of this character left Chicago on Saturday morning, April 30, at 10 o'clock, and arrived at Philadelphia on the evening of May 3, making the distance of nearly 1,000 miles in less than 100 hours. The train was composed of forty grain cars, and each car was loaded to its maximum, containing 60,000 pounds of corn. The weight of the entire train, including locomotive and caboose, was 4,000,000 pounds, and the length of the train over all was 1,600 feet. To furnish the power necessary to move this granary on wheels the tender of the locomotive had to carry 20,000 pounds of coal and 3,900 gallons of water. Extra engines or "helpers" were provided in crossing the heavy grades of the mountains.

No attempt at fast time is contemplated in this movement, but the fact that the train goes through solid, without stopping for the usual change of engines, saves a great many hours on the schedule time of the ordinary through freight train. The through grain train is equipped with all the modern appliances, including air brakes. It is run on a special schedule and receives almost as much at-

tention at the hands of the transportation department as a passenger train. At each stop it is inspected with as much care, and its progress over the lines is as carefully watched by switch and signal men. This is the first freight train movement of this kind ever inaugurated in this country, and it is expected that it will greatly facilitate the transportation of cereal products to the Eastern seaports.

### A VENTILATED GRANARY.

That damp grain heats when stored in tight bins is only too well known to warehousemen who have suffered loss from this cause. Having had their attention thus forcibly called to the effect of storing damp grain and new corn, grain men everywhere have exercised their ingenuity to preserve such grain from deterioration. Among the many practical elevator men who have considered this matter are W. R. Vanderveer of McCool Junction and C. F. Shedd of Lincoln, Neb., both experienced grain handlers, the latter having spent many years in the trade in Nebraska and operated elevators at Fair-



A VENTILATED GRANARY.

field, Edgar, Carleton, Davenport and Belvidere from 1873 to 1884.

Not satisfied with the means commonly employed to improve damp grain, such as periodical handling through conveyors and elevators, and mixing with dry grain, Messrs. Vanderveer and Shedd devised a Tile Ventilating and Dry Storage Grain Elevator, patented March 8, 1892, which Mr. Vanderveer now has in operation at McCool Junction, Neb. In the accompanying cut representing a cross section of the Vanderveer-Shedd Tile Ventilating and Dry Storage Grain Elevator the lower portion of the elevator is supposed to be a basement. The hinged doors on either side are to admit fresh air. Vertical flues, running from the floor to the roof, are made of unglazed drain tiles. The floor is marked off in squares—16 to 18 inches each way, and at each intersection of the lines a hole is bored through the floor the size of the bore of the tile, which stands directly over the hole. Each course of tile-pipes is connected with each other, and stayed to the sides of the building by transversely arranged wires; or metal strips formed to suit the size of the tile can be used. At the roof, the tiles enter wooden flues formed partially by the rafters and roof boards. These flues continue to the rafters of the cupola and discharge into space just under the ridge of the cupola, and this space communicates with the open air through chimney cowl provided with vanes.

The bins are filled by conveyors running the length of

the cupola and are emptied through a series of small hoppers with sliding bottoms operated by levers placed conveniently in the basement passage under the floor; and sliding doors placed along the sides of this passage way regulate the flow of the grain into the collecting conveyor. Elevators on this plan can be built complete at a cost of \$10,000 to \$20,000 for 100,000 to 200,000 bushels' capacity.

The unglazed tiling absorbs the moisture in the damp grain and the current of air passing up the tile carries it off. The cool and dry fresh air from outside enters the tiles at the floor of the bin and permeates the entire mass of grain, effectually cooling and drying it with results far better than when artificial heat is used; but if desired hot air can be forced through the pipes. Slides are provided at top and bottom to prevent the access of moist air in stormy weather.

The advantages claimed for the Vanderveer-Shedd Tile Ventilating and Dry Storage System are that damp grain which has not soured can be restored to its normal condition in a short time; corn that is sound and will easily shell, though it will grade no better than No. 4, can be stored with safety, and in a reasonable time will grade No. 2; wheat and other small grain, threshed from the shock, naturally tough and sometimes damp from rain, can be safely stored and the grade raised one or more points, and grain can be safely stored at the seaboard, where moisture is so penetrating, for an indefinite length of time. By the successful operation of this system the storage of damp grain which has so often been a source of loss to the elevator man is made a profitable branch of his business; and he has the satisfaction of knowing that the contents of his elevator are constantly improving in quality instead of deteriorating.

### THE WORK OF CORN'S CHAMPION IN EUROPE.

Mr. Charles J. Murphy, the apostle of American corn in Europe, writes from St. Petersburg in relation to the prospect of greatly extending the consumption of corn for human food in that quarter of the globe, especially in Russia and Germany. He has been engaged for about five years past in the endeavor to make foreigners understand its great value, and has succeeded very well, considering the intensely conservative nature of the Europeans. He thinks there is reason to hope that the Germans will ultimately realize its value to the extent of using it as much as we do at home, in proportion to the number of inhabitants. Of course other people would follow the example, and we should then be in a fair way to realize the expectation of such a permanent European demand as to make an appreciable difference in prices here. The great importance of such a movement may be inferred from a comparison, instituted by Secretary Rusk in his official report, to the effect that if we

succeeded in raising the price of our corn only five cents per bushel it would add a billion dollars to the wealth of the country in the course of the next ten years. The first three and a half years Mr. Murphy worked in this direction on his own responsibility and expended his own funds in the cause. Since then he has had a little aid from the government and is acting for it as special agent "for the purpose of investigating the feasibility of extending the demands of foreign markets for agricultural products of the United States, particularly that of Indian corn." The amount appropriated for the purpose last year was only \$2,500, a sum altogether inadequate to a proper carrying out of the undertaking. It is highly desirable that the appropriation for the coming year be more liberal. It is not improbable that if sufficient money be furnished to enable Mr. Murphy to push the work energetically through the next twelve months so much ground will have been gained that the matter may be left to private effort afterward. There are some cases in which parsimony is not good policy, and this may be one of them.

The speculator went to church last Sunday and when the contribution box came around he dropped in a hundred dollar bill. "Jerusalem!" whispered his partner, "what did you do that for?" "That's all right," was the assuring response, "I'm putting that much up on futures."



### THE CALDWELL-CHARTER GAS ENGINE.

The facility with which an engine run by gas or gasoline can be set up and run in almost any location, being always ready for work, yet costing nothing for attendance and not using any fuel except when it is at work, carries great weight in aiding the introduction of these most convenient motors. The Improved Charter Gas Engine, shown in prospective and in section in the accompanying illustration, is for gasoline, coal gas, natural gas, or producer's gas, and it has been perfected by years of experience, until it is deemed to be about as simple and effective as it is possible to make such an engine. In its construction all delicate parts have been avoided, making it economical, safe, automatic and clean, while it is, as with all engines of its class, always ready for work, so is particularly adapted for small elevators, or large ones not requiring over 75-horse power. A great many engines of this class are now being used in country grain elevators, and, as a rule, elevator men seem to be well pleased with their work.

This engine develops full power at once and does not increase insurance, while the cost of running it is in proportion to the work done. The supply tank, as will be seen, is lower than the engine so that as soon as the latter stops work the oil in the pipe flows back to the tank. The engine will work equally well on manufactured or natural gas, calling only for the attachment of a gas valve and requiring no change in the engine. As to the economy of its work the engine uses only one gallon of 74 per cent. gasoline in ten hours to the indicated horse power when doing full work. The price of the gasoline varies from 7 to 13 cents per gallon, according to the quantity bought and location of the purchaser, but with an average price of ten cents a gallon, the cost of running the engine would be only 1 cent per hour for each indicated horse power.

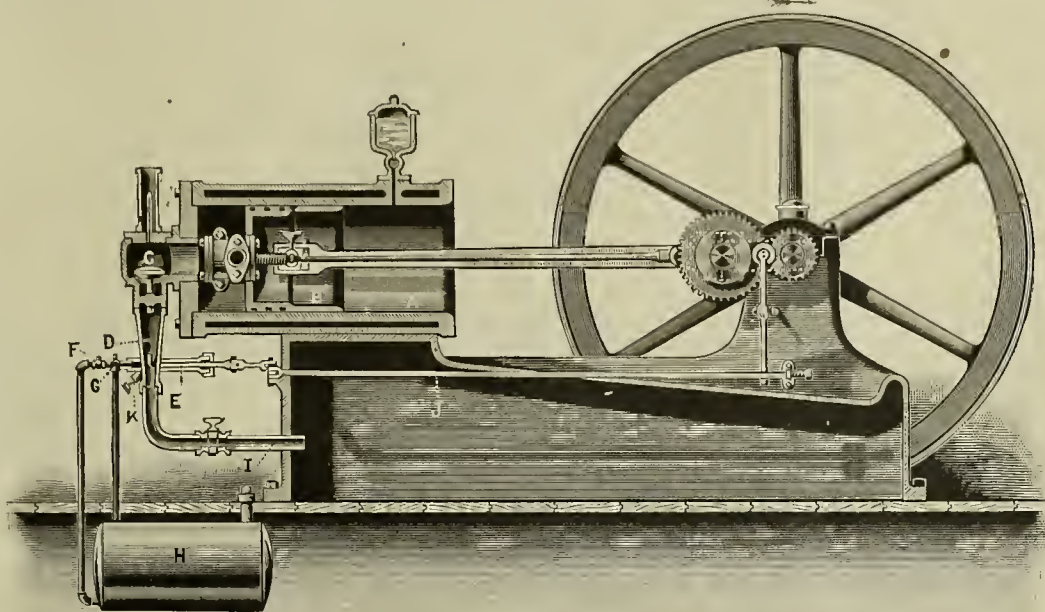
The engine is so simple in construction and operation that an unskilled hand can always see at a glance whether it is working right and give it all the attention needed. Instead of attempting to govern the exact charges of gasoline, which has proved so difficult because so delicate in engines, the Improved Charter Engine is so constructed that a simple pump draws from the tank a charge of gasoline much greater in quantity than is required for carbureting the present charge of air. The pump remains open or at its outstroke during the time the air is being drawn into the cylinder past the nozzle or pipe. This pipe or nozzle is connected to the gasoline chamber in the pump, and the throttle valve so regulates the gasoline that the air can only carry a fixed quantity with it. The gasoline which remains in the pump and its valve chamber is immediately forced out of the way of the nozzle in the air pipe, and the surplus returned to the tank. In this way all delicate regulation is avoided. It will readily be seen that should there be any slight wear to the pump mechanism, such wear will not affect the working of engine, as the quantity of gasoline will always be more than sufficient to supply the small amount needed.

In the sectional view, *A* is the cylinder, *B* the piston, *C* the inlet valve to cylinder, *D* mixing chamber, *E* is gasoline pump, *F* and *G* check valves, one opening inward, the other outward; *H* is the gasoline supply tank, *I* is the air suction pipe; *J* is a connecting rod coupled to the gasoline pump and operated by the governor, *K* the supply regulation valve. The oilers are automatic, requiring no attention except filling of cups, and the construction insures perfect and permanent alignment of engines. All wearing parts are of materials best suited for service

required. The sole manufacturers are H. W. Caldwell & Son, the well-known makers of conveying, elevating and power transmitting machinery of 127-133 West Washington street, Chicago, which is enough to guarantee that the engine is first class in every respect.

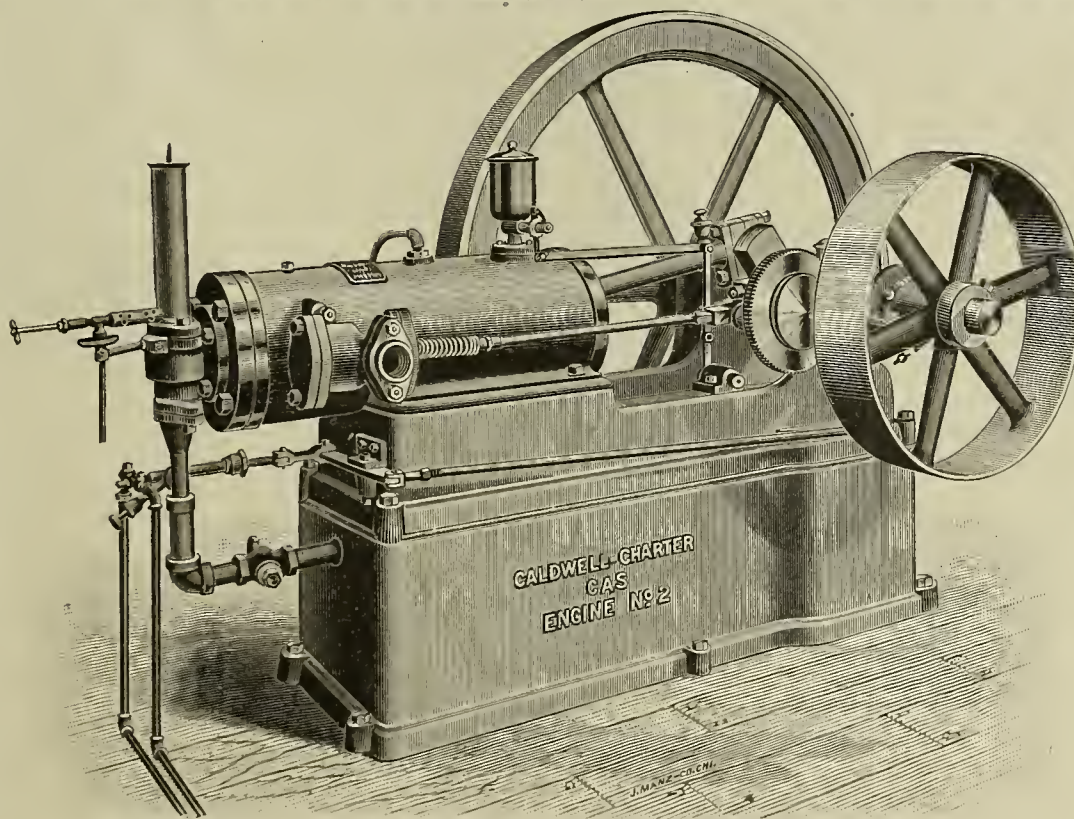
### THE PRODUCTION OF HEMP.

The Superintendent of the census has sent to the press a bulletin on hemp production, prepared by Special Agent Hyde, in charge of the Division of Agriculture. The bulletin shows the total area of land devoted to the



THE CALDWELL-CHARTER GAS ENGINE.

cultivation of hemp in the United States in 1889 to have been 25,054 acres, and the production of fiber 11,511 tons, valued at \$1,102,602. The average yield per acre is 1,029 pounds, and the average value per acre \$44.01, or \$95.79 per ton. Kentucky produced 93.77 of the total hemp crop of the country. Illinois produced 4.83 per cent. and the remaining six states from which hemp was reported had an aggregate yield of only 161 tons.



THE CALDWELL-CHARTER GAS ENGINE.

Although the crop of 1889 was more than double that of 1879, hemp production is regarded by those engaged in it as a declining industry, a condition which they attribute to foreign competition and, to some extent, to their own lack of improved machinery for breaking and cleaning the fiber. No previous census report contained any statistics of the acreage in hemp or of the value of the product.

Grain buyers of Wichita offered C. Wood Davis 80 cents for his corn, but he undertook to run it into Chicago during the November corner and got there two days late and only realized 23 cents. When the sage of the Minnecah River was predicting \$2 wheat he sold his own crop at Goddard, Kan., for 71 cents. No wonder he attacks the bears.

### A SPLURGE IN THE WHEAT MARKET.

"70"—"70 1/4."

The floor was a living hell. A seething, raving torrent of half-crazed men; a Babel of clamor; an air rent with wildly flung arms and hands.

The street had gone mad. It was one of those sudden fits of fury that come after a long period of stagnation; the air trembles with the storm for a while; then the tempest, dying, leaves naught behind but the nerve-killing memory of it and the ruined lives that lie behind.

This time it was wheat. The bulls were tossing it up viciously. The bears were grinding their teeth and waiting for the break to come. Would it come?

The messenger boys were breathless. The arms that were not flung skyward handed out orders and telegrams so rapidly that the wires could hardly carry them all. Fortunes were hanging on threads, threads of wire; the Western Union was making money, whether it was bull or bear that won.

Ah! That was a cable that time. "London selling." "70"—"69 3/4."

The pit became more like a witch's caldron than ever. Blood-purple faces, blue swelling veins, hoarse, inarticulate yells, uncouth, joint-closering gestures—all the animal things in man most patent. Saw you ever the tigers fed in the Zoological? Bah—

a very gentle sight to this. "69 1/2."

The bears yelled louder. The market was bending to them. It was, with many of them, a fortune either way. It was the battle for wealth crowded into hours; many drag it through a lifetime. But all the fierceness of a life's struggle was essential here. "69 1/2"—"69 3/4"—"70."

The bulls leap in very frenzy of glee. It was another cable from London. "Strong buying tendency." Then advices of a panic in the West—wheat rising like a kite.

The bears began to waver. The "shorts" trembled. It was the bulls' opportunity—to become rich suddenly. To break others—no matter. "70 1/4"—"70 1/2."

The climb began. The fractions were despised. The jumps were by cents.

If it had been hell on the floor before it was a greater inferno now. The shorts turned pale. But they still fought. Grim, savage, desperate, bloodless.

It was no use. The price went up steadily as the thermometer toward a summer noon. There was a fever in the West, and it was contagious—by wire. Now it was "80."

Would the clock ever strike the closing hour? No; there were fortunes to be made; lives to be ruined. For the wheat itself, who cared? It was the same wheat all the while, but—"90."

Still upward—"81."

Puff!

There is a little ring of smoke in one corner, and under it there is a dead man, with a fuming pistol hanging to a limp hand. The crowd surges that way a little.

"Corbridge," says some one; "he was a good many thousand bushels short. It'll be hardish on his family." "\$1.01."—And the market closes.

Fairport's grain trade is booming. In one day an order was made on the Pittsburg & Western for 325 cars to be loaded with grain.

The increase in Philadelphia's grain export trade is credited to the efficient grain inspection, to good terminal facilities, to the placing of Philadelphia in line with other markets by the railroads and the energy of its business men.



## INSECTS INJURIOUS TO STORED GRAIN.

BY H. E. WEED, M. S., OF THE MISSISSIPPI EXPERIMENT STATION.

The Angoumois Grain Moth (*Gelechia cerealella*, Oliv.) has caused much damage to stored grain in this state for many years. At the station during the past year it has been exceedingly destructive, wheat put into the barns in June being entirely destroyed by September. It attacks wheat and corn especially, but other grains are by no means exempt.

The first extensive account of the habits of this insect was given in 1736 by Reaumur, a French naturalist, who found it very destructive to barley at Lucon, France. In 1760 it was very destructive to wheat in the province of

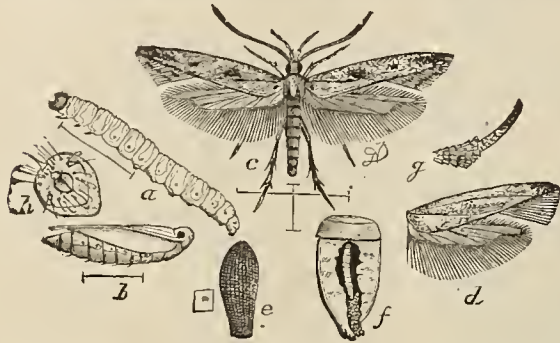


FIG. 1.

Angoumois, and Harris states that "the afflicted inhabitants were thereby deprived not only of their principal staple, wherewith they were wont to pay their annual rents, their taxes, and their tithes, but were threatened with famine and pestilence from the want of wholesome food." Two members of the Paris Academy of Sciences were commissioned by the French Government to visit the Province of Angoumois to investigate the habits of this insect, and since the publication of their report the insect has received the popular name of "The Angoumois Grain Moth." The insect is very destructive throughout Southern Europe at the present time, and has become a well-known pest.

The first record of its appearance in this country was made in 1768 by Col. Landon Carter of Sabine Hall, Virginia, in an article published in the Transactions of the American Philosophical Society, in which it was stated that the insect had been noticed in North Carolina some forty years before and had spread from there into Virginia, Maryland and Delaware (Harris). Since the publication of this article, various writers have recorded its appearance in most of the Eastern states. It is most abundant, however, throughout the Southern states, where it yearly causes great damage to grain before as well as after it is gathered. In the Northern states it is not so abundant, the cooler temperature retarding its growth.

The imago or mature form of this insect is a small moth, shown at *c* in Fig. 1. The wings expand slightly over one-half inch in length, and the antennae are nearly as long as the body, tapering at the extremity. The body and forewings are of a light gray color and have a soft, shiny appearance; the hindwings are of a darker hue than the forewings, narrow and tapering to a point at the outer ends. The outer posterior extremities of the forewings bear light gray colored scales which are thickest near the tip of the wings. The fringe surrounding the hindwings is of the same color as the wings, being shortest at the outer anterior extremity (when the wings are outspread as in the figure) and longest at the inner posterior edge. The under side of the wings is much darker than the upper side. The legs are slightly darker than the body, the posterior pair being quite hairy, and each bearing two prominent spurs.

An enlarged egg is shown at *e* in Fig. 1. According to Riley it is very small, flat and oval, of a pale red color with prismatic reflections.

The larva is of a light color and measures about one-fourth inch in length when full grown. It is shown at *a* in Fig. 1. The head is brown and the body gradually tapers posteriorly from the second segment. The body bears many light colored hairs, those upon the first and last segments being the longest. Each of the first three segments of the body bears a pair of true legs while each of the sixth, seventh, eighth, ninth and last segments bear a pair of prolegs. The prolegs are small and terminate in minute hooks.

The pupa, which is nearly one-fourth of an inch in length, is shown at *b* in Fig. 1. The anterior portion

and wing pads are dark brown, the abdomen being somewhat lighter. The wings reach nearly to the posterior extremity, and the eyes, which are plainly visible, are black.

The moths are nocturnal in their habits, and the eggs are laid either upon standing grain in the field or when stored in the granary or cribs. When deposited upon corn the eggs are generally placed under the thin membrane at the base of the seed. They are also laid in the grooves or depressions in the seed, singly as a rule, or sometimes in clusters.

From the egg is hatched, in a few days, the young larva, which immediately bores into the grain, where it eats the farinaceous portion, leaving but a thin shell. The small hole through which the larva entered becomes closed by its excrement so that to all appearances the grain may be sound although consisting of but a thin shell. The infested grain is easily detected, however, by its light weight, and if a few seeds are thrown into water those infested will rise to the surface. In wheat and other small grains but one larva is found within a seed, but in corn several are often found. It is probable that



FIG. 2.

in the smaller seed the larvae often devour their own excrement.

The length of life in the larval state will vary according to temperature, and when mature, the larva forms the pupa within the grain, first boring a small hole to the exterior for the escape of the moths. In a few days or weeks, according to the temperature, the moths make their escape and lay the eggs for another brood.

The number of annual generations will vary according to climate and temperature. Harris states that there are but two broods in Massachusetts, and this is doubtless the case in all the Northern states. In this state, however, there are at least eight annual generations. In warm weather it takes but a month to pass from the egg to the moth and the various stages of the insect can be found in infested grain at all times of the year. There are thus no stated periods at which the moths come forth, and if a quantity of infested grain is put in a glass jar and covered with a piece of cheese cloth, the moths will continue to issue from the grain for a long time.

The insects reproduce so rapidly that it takes but a short time to destroy the grain when stored. In Fig. 2

is shown an ear of corn from which the moths have escaped. The nutritious portion of the grain is entirely eaten and infested grain will not germinate.

Several European writers upon this subject mention parasites which prey upon the larvae of this insect. In 1882 Mr. F. M. Webster found a small mite (*Heteropus ventricosus*, Newport) destroying large numbers of the larvae of this insect in Illinois. The mites are exceedingly prolific and kill the grain moth larvae by piercing the skin and sucking the juices. Small numbers of this mite were found in some infested wheat at the station barn during October, and it is probable that they destroy large numbers of the grain moth larvae.

Mr. Webster also describes a chalcid parasite, *Pteroma-*

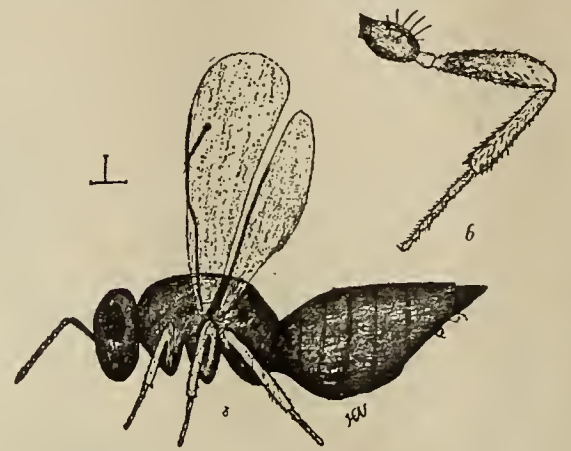


FIG. 3.

*lis gelechiae*, which attacks the larvae of this insect, and some infested wheat brought into the laboratory in October contained large numbers of this parasite. About an equal number of parasites and moths issued from the infested wheat, showing that the parasites do immense good in keeping the grain moths in check.

This parasite is shown in Fig. 3, and is a small, black, fly-like insect with four transparent, almost veinless, wings. The antennae are quite long, of a yellow color, the head broad, eyes prominent, abdomen triangular, and the legs light yellow or nearly white. The male is somewhat shorter than the female, being slightly less than one-tenth of an inch, with an obtusely triangular abdomen. The female is little over one-tenth of an inch long and the abdomen is acutely triangular.

[To be Continued.]

## HAY GRADES AT BALTIMORE.

The different grades of hay, as generally understood by the trade, are as follows:

Choice Timothy.—To be timothy, and not more than one-eighth of other tame grasses mixed; good color well cured, and free from must.

Strictly Prime.—To be timothy, and not more than one-fifth of other tame grasses mixed; good color, well cured and free from must.

Prime.—To be sound, well cured, good color and free from must, and may contain three-fourths of tame grasses and one-fourth timothy.

Mixed Hay.—To consist of tame grasses, mixed; good color, well cured and free from must.

Fancy Prairie.—To be purely upland hay, free from swale grasses, well cured and free from must.

Choice Prairie.—To be upland and midland hay, good color, well cured and free from must.

Prime Prairie.—To be a mixture of upland and midland hay, with about one-eighth mixture of swale grass, good color, well cured and free from must.

Common Prairie.—To consist of swale and slough hay, mixed with upland and midland hay, good color, well cured and free from must.

All kinds of hay badly cured, stained or in any way out of condition, are regarded as no-grade.

The steamship Tynehead has sailed from New York with a full cargo of corn and flour for the peasants starving in Russia.

The committee appointed by the Minnesota Legislature to investigate the elevator business was in session fifty-eight days at a total expense of \$8,807.96.

Omaha is situated at exactly the right spot to become the greatest grain market west of Chicago.—*Omaha Bee*. Kansas City also claims to be situated at exactly the right spot.



**TWO AIDS TO THE GRAIN TRADE.**

West Superior is one of the few cities situated on the shores of the great lakes that have been furnished by nature with a perfect, landlocked harbor. To the north-east lies Minnesota Point, a bar against the angry waves of Lake Superior. On the shores of the safe harbor formed by this protection stand the huge elevators that handle the grain of the great Northwest. Prominent among these is the Great Northern Elevator "A," situated on the east shore of St. Louis Bay directly opposite the city of Duluth, Minn. This iron-clad structure is truly great. The stone foundation wall, 17 feet high, is laid on piles driven 20 feet into solid earth. On the wall is built the crib work forming the bins, which are 67 feet high and surmounted by a five-story cupola towering 153 feet in the air. The building is 385 feet long and 98 feet wide and has a total bin capacity of 1,750,000 bushels. The brick engine room contains the powerful boilers and engines needed to drive the heavy elevator belts and other machinery to unload 400 cars and clean 100,000 bushels per day of ten hours. An electric plant furnishes light

rence Canals not being of sufficient depth, this route is not profitable.

**THE STARCH INDUSTRY.**

According to the last statement from the Bureau of Statistics, about 14,000,000 pounds of starch were exported during eleven months of last year, against half of that quantity for the year previous. The movement of corn and potato starch to the four ports of the United Kingdom has been unusually large for the past few months on account of the short crops of corn and potatoes on the other side. It is very unusual to send potato starch out of the country.

Corn starch is the leader, with an annual production of about 350,000,000 pounds. The number of factories in operation has been reduced from twenty-five to thirteen because of overproduction. Some of the larger mills are working from 1,000 to 3,500 bushels of corn per day. As only twenty-five pounds of starch can be obtained from a bushel of corn manufacturers are complaining of the very narrow profit in the business, and were it not

**DRYING CORN FOR THE CONTRACT GRADE.**

The facilities for drying corn and other grain at Chicago are better and greater than ever before. In addition to the dryer in the Neely houses Armour has lately completed a dryer capable of turning out 15,000 bushels in twelve hours. By running night and day he can double his capacity. No. 3 corn is right on the line of the No. 2 grade, and it is an easy matter to get rid of the 2 or 3 per cent of moisture that keeps it out of the contract grade. Armour says he can make No. 2 corn from No. 3 at a cost of one cent per bushel. The Armour and Neely dryers could turn out 40,000 bushels of grade corn a day if necessary.

A representative of the State Grain Inspector's office, who has been to Kansas City to look over the ground and see what may be expected in the future, says that in his opinion there will be little contract corn from the Southwest this spring. There is no corn at all in Southern Kansas, where much is looked for at this time of year, and in the northern tier of counties it is none too



TWO AIDS TO THE GRAIN TRADE.

when it is necessary to operate the establishment at night.

The accompanying cut, which, through the courtesy of the publishers of the *Great Northern Bulletin*, we are permitted to present to our readers, shows the elevator loading wheat into a whaleback steamship, the Co'gate Hoyt, which was built at West Superior in 1890 not far from the Great Northern Elevator "A." A few years ago the whaleback existed only in the mind of its sanguine inventor, Capt. McDougall, but now its peculiar fitness for carrying grain is recognized everywhere on the great lakes. The first craft built on this model was launched at West Superior in the summer of 1888. It cost \$45,000 to build, but the owners divided \$70,000 profit in two years, and now that many more have been built the grain trade will share in the profit in cheap transportation.

What distinguishes the whaleback from other types of vessels is the absence of the high prow and the bending of its sides together at the top to form a curving deck, from which the waters easily roll without materially impeding its progress through the waves. With equal draft the whaleback carries a heavier cargo than the ordinary vessel and requires less propelling power. The advantage of drawing little water is important in the lake carrying trade, especially as our harbors and the channels connecting the lakes are comparatively shallow. The trip of the whaleback Wetmore from Duluth to Liverpool direct with a cargo of wheat is well remembered. However, owing to the Welland and St. Law-

rence for the odds and ends which are transformed into gums for special uses, it is said there would be absolutely no money in the corn starch trade, except for those firms manufacturing on a very economical basis. The violent fluctuations in the corn market are always a disturbing element, as it is not an easy matter to determine when to lay in supplies. A favorable purchase of raw material leaves the manufacturer of starch in a position to meet competition, but a high market for corn may rob him of his profit for a while, at least, as an advance in the price of raw material must be permanent to have any influence on starch.

Wheat starch is another article that is over produced, although there are only seven mills devoted to its manufacture. The consumption does not exceed 10,000,000 pounds per annum, but efforts are being made to push its sale as a substitute for corn starch in the laundry and among industrial establishments of the East.

Insurance of the growing crop versus fire is just now very popular on the Pacific slope.

More than 6,000 men are now at work on the buildings of the World's Columbian Exposition.

Very little corn is in cribs at country stations in Iowa, Nebraska and Kansas compared with former years.

The German Government has not yet declared its intention of adopting cornmeal for army bread, and with the improvement in crop prospects the chances for its adoption grow less.

good in quality. It has been exposed to the weather all winter there and in Nebraska and is not coming in in good shape. There has been too much rain. There is a considerable proportion of poor ears among the unshelled corn and this poor stuff pulls down the grade of the entire quantity. He says that if the farmers would take time to look over their corn before it goes to the shellers and pick out the poor ears they would raise the grade of the good corn and could get something for the poor corn all by itself. He believes that the results of such a course would be highly satisfactory.

A movement to abolish days of grace on commercial paper has been set on foot in Massachusetts, where a legislative committee is giving hearings on a bill having that object in view.

We have been asked what is a good standard of linseed. We should say that a good standard weight was 52 pounds to the bushel, and that 50 pounds should be taken as the minimum. The yield of oil averages 11½ gallons to the quarter, and should weigh 103½ pounds, say a minimum of 100 pounds.—*The Oil Miller, London.*

An ear of genuine Egyptian corn was exhibited on the floor of the Cincinnati Chamber of Commerce the other day. Egyptian corn resembles our Indian product in its general contour, but it bears no silk, and each separate grain is enveloped in a distinct husk of its own, the daintiest and most effectual sort of a cover, the tissue of the husk being as fine as silk.



### RAISING WHEAT IN BRAZIL.

The March Bulletin of the Bureau of American Republics says: The cultivation of wheat in many of the provinces of Southern Brazil was as early as 1805 quite an important industry, and in the elevated regions of the Espirito Santo, and Bahia in the North, it was successfully grown. In the present state of Rio Grande do Sul it was produced quite extensively and exported until about 1820, although the country was then sparsely settled. A general failure of crops for two or three years caused the abandonment of its cultivation. It is claimed that the soil generally of this state is adapted to wheat growing.

In the Northern states of Brazil lack of communication, and the drouth which occurs are hindrances to agricultural developments. In the Amazon Valley the culture of breadstuffs of the temperate zones does not succeed. Wheat, barley, oats and rye have a rank growth, but produce no grain. Indian corn grows abundantly but is used for food only in times of scarcity on account of its heating qualities.

While wheat has been grown experimentally as far north as Pernambuco, its profitable cultivation seems to be confined to the states of Rio Grande do Sul, Porana and Santa Catarina, and perhaps Sao Paulo and Minas Geraes, where it is stated there is good wheat land. The probabilities are that only a comparatively small area of this great country is adapted to the growth of this product.

The raising of wheat, laid aside or neglected for more productive cultivation, it is claimed will in a few years increase rapidly. The Government has offered bounties for agricultural products and to-day the state of Rio Grande do Sul raises sufficient of this grain to supply half of its consumption.

### THE GRAIN BUYER NOT THE FARMER'S ENEMY.

The *Pioneer Press* says the wheat investigation at St. Paul was a dreary fiasco. It dragged its weary length along through several weeks without eliciting a single fact that can be recognized as in any way helpful to the wheat growers of Minnesota. Certainly the results do not justify the appointment of the investigating committee or the rather large expenditure of money required by the investigation which did not investigate, at least not to any good purpose. It brought out certain statements of fact tending to show that combinations exist between the grain buyers along certain lines of road, and the officials of those roads, and those statements point to the conclusion that if the farmers are suffering from any ills in the shape of conspiracies against their welfare, such evils are not to be cured by suppressing trading in grain futures in the great markets of this country. If the allegations made by the Alliance be true, the greatest enemies of the farmer are not the speculators, but the cash buyers. It is the men who purchase grain for shipment to millers at home and abroad who oppress by forcing down prices to the lowest possible point and combine with each other to prevent the original seller of the produce from obtaining any relief by finding a market elsewhere.

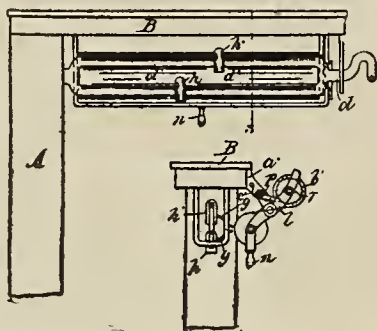
The grain growers of Minnesota and the Dakotas have not received as much for their wheat as they thought themselves entitled to. They did not know where the trouble was, and looked round for it. They were told by certain agitators that they, the farmers, are the victims of a widely organized conspiracy to swindle them. They pay too much in the shape of freight rates, are cheated in elevator charges, cheated in the grading and mixing of the grain, combined against by the railroad official and the merchant who buys from them, and finally robbed of several cents per bushel by the infernal bears on the Boards of Trade of Chicago and other cities, who always sell the market down when the farmer has more than usual to dispose of. The statements were believed, though the fellows making them have many a time and oft been proven to be prevaricators whose chief capital is a lie, and whose greatest talent is the ability to make that falsehood wear the guise of truth.

The charges are true in a certain sense. The men who deal in the grain and handle it either actually or by means of receipts issued for it by the elevators are in the business with intent to make money by it if possible, and they are human beings. In both of these respects they resemble the average farmer, and it is absurd to suppose

that not one of them will take a mean advantage when he sees a favorable chance for it. But the probability is that as a class they are just as honorable and fair in their dealings as the same number of farmers would be, and that they do not make extravagant profits out of the business. If the investigation results in forcing that conclusion on the minds of a moderate number of the farmers it will not have failed except ostensibly, and it will have been a magnificent success if it be the means of crowding to the wall the blatherskites who have done so much to inflame the farmers with a sense of wrong supposed to be inflicted upon them by all outside their own class. The fellows who have preached that the farmer is robbed by the capitalist, that he has a right to repudiate a large portion of his debts by paying them in cheap dollars, and held up to him the vision of a Utopia in which all legislation shall be for the especial benefit of the agriculturist, are his real enemies. They should be recognized and treated as such, and the taking of such an attitude would minister more to the real comfort of the farmer than any piece of legislation that could be devised by his best friend.—*Chicago Tribune*.

### RECORDING DEVICE FOR SCALES.

The recording device for scale beams, illustrated herewith, has been invented by George E. Miller of Lynn, Mass. The device is very simple and works well. When



RECORDING DEVICE FOR SCALES.

taking a weight the position of the rider is marked on a long roll of paper, placed parallel to the beam, by a point on the rider which marks the roll when the weighman grasps the handle *n*, shown in the cut, and presses it toward the beam. After each operation the roller *r*, actuated by the rack and pinion *b*, winds up a portion of the paper, exposing a new portion to the marker on which the next weight may be recorded. A second marker is provided with suitable mechanism to mark on the roll the number of weights suspended from the beam.

### CHANGED THE RULES OF INSPECTION.

At the meeting of the Boston Chamber of Commerce April 16 the following changes and additions to the rules governing the inspection of corn and oats were recommended and acted upon:

It was voted to strike out the grade of un-"yellow" in corn and substitute words so that the grade shall read: "Steamer yellow shall be three-quarters yellow in color, slightly soft or damp, but must be cool; or corn not good enough for No. 2 yellow in consequence of containing a moderate mixture of poor kernels."

It was voted to add a grade to be known as No. 3 corn. No. 3 corn shall include all damp corn, or corn slightly inferior to steamer corn in quality, but must be cool and sweet, and to substitute words so that it shall read: "No grade shall include all wet, unsound or very dirty corn unfit for other grades."

In oats it was voted to strike out the grades "extra white" and "extra mixed," and add the following grade: "No. 2 white clipped" shall be seven-eighths white, sweet, reasonably clean, and weigh not less than thirty-five pounds per bushel.

At a meeting of the South Dakota Railroad Commissioners at Huron, May 4, plans were devised for securing better grain rates than those in force, which are deemed too high.

Steam plows have been used in California for several years, and recently one has been successfully used in Southeastern Kansas at Garden City, where it tore up the ground at the rate of forty acres per day at a cost of \$15. The engine travels three miles per hour, and cuts a strip twelve feet wide at each passage.

### FARMERS' ELEVATORS IN NORTH DAKOTA.

The secretary of the Northwestern Farmers' Protective Association was in St. Paul recently and interviewed the Northern Pacific Railway officials on a proposed contract to lease all elevators, warehouses, and platforms, also to build elevators, warehouses, and platforms on the railway right of way to be leased to the association. He claims that he was successful in his mission with the Northern Pacific Railway officials, who readily assented, and the agreement has been sent to New York for signatures. The officials of the Great Northern Railway have agreed to assent to any agreement made with the Northern Pacific. The basis of the reported agreement is as follows:

1. All elevators, warehouses, and platforms to be by this association erected along the right of way of said company shall be in all respects public warehouses, receiving and storing grain for all applicants, whether members of the association or not, and in accordance with the laws of the aforesaid states.

2. Upon an application signed by at least twenty members of the aforesaid association, showing the number of acres each member has under cultivation, a lease shall be granted to the association to erect a platform, elevator, and warehouse, or to lease warehouses, elevators, and platforms on terms agreed on and in conformance to the state laws of the said states.

3. Whenever such elevators, warehouses, or platforms are erected by the association the entire cost thereof shall be borne by said association. If at any station there shall not be sufficient right of way and it becomes necessary to secure additional right of way and extension or side track the association shall pay the entire cost of said extension of track and secure said additional right of way.

4. Upon receiving from the association an application, accompanied by a petition in writing, signed by at least twenty members of the association, representing the number of acres cultivated, asking the privilege to erect an elevator, warehouse, or platform at any designated station, the membership and acreage of the signers being certified to by the president and secretary of this association, the railway company shall issue to the association a lease for the premises desired and indicated by the officers of the association, said lease being in due form for use of governing elevator and warehouse locations by said company.

### TOLEDO RECEIPTS AND SHIPMENTS.

In the first week of May Toledo received 54,163 bushels wheat, 16,144 bushels corn, 41,301 bushels oats, and 11,111 bushels barley, against 94,515 bushels wheat, 19,600 bushels corn, 63,513 bushels oats, and 2,627 bushels barley in the same week of 1891. The shipments during the first week of May were 54,268 bushels wheat, 2,311 bushels corn, no oats, and 4,092 bushels barley; against shipments of 69,686 bushels wheat, 12,064 bushels corn, 13,987 bushels oats, and 539 bushels barley during the same week of 1891.

Since August 1 Toledo has received 6,064,993 bushels wheat, 980,412 bushels corn, 1,639,258 bushels oats, and 986,578 bushels barley, against 3,913,999 bushels wheat, 1,106,356 bushels corn, 1,545,811 bushels oats, and 1,268,255 bushels barley, received in the corresponding period of 1890-91. The shipments since August 1 have been 5,181,263 bushels wheat, 515,434 bushels corn, 301,073 bushels oats, and 99,916 bushels barley; compared with 5,891,851 bushels wheat, 817,592 bushels corn, 478,062 bushels oats, and 368,791 bushels barley shipped in the corresponding period of 1890-91.

### CHEAPER ALCOHOL FROM CORN.

The *Philadelphia Ledger* says 22 1-5 quarts of alcohol to the bushel of corn were made in a large mash at the Woolner Distillery at Peoria April 16 by the Takamine process, "which consists of doing entirely away with expensive malt and small grains, using corn alone. Obstacles have been successfully overcome, and the predictions of the inventor, Jokichi Takamine of Tokio, Japan, are verified. An increased yield of over two quarts of alcohol to the bushel was obtained in addition to a large saving made in the cost of the original grain bill. Another great feature is the economy of its introduction into any modern equipped distillery. Formerly 20 quarts was the most made under the most favorable conditions, and generally 18 to 19 quarts."

The rate on grain from St. Louis to the seaboard was reduced May 4 to 23 cents per 100 pounds.



### ALLIANCE WAREHOUSES IN WASHINGTON.

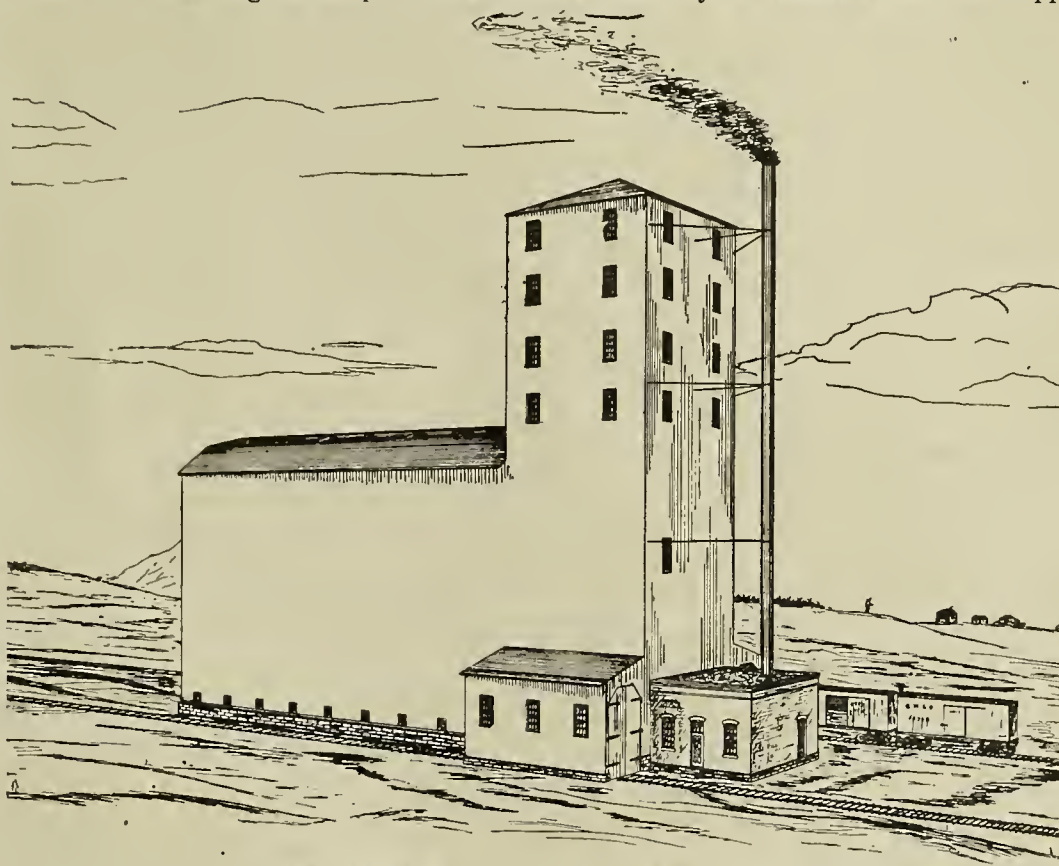
The Farmers' Warehouse Associations of Eastern Washington and Western Idaho are probably the most successful farmers' associations now storing grain. That they will continue to be successful for any great length of time is not to be expected, although they may. The great majority of the farmers' co-operative business ventures have lasted but a short time, and many have been dismal failures. From Washington papers we have gleaned the following statements. The enthusiasm of the agitator has undoubtedly magnified some of the facts but we give the statements as published:

D. F. Ravens, president of the Washington State Farmers' Alliance, said the plan of building our own elevators and warehouses is proving a grand success. We now control fourteen warehouses and elevators in this state, and by their help we are able to obtain from five to ten cents per bushel more on our grain. We have been aided greatly in this work by the storage law passed by the Legislature last winter. According to its provisions an elevator company, when it receives grain for storage, must keep it in the elevator or warehouse until the owner gives them permission to take it out. The result is that the elevators and warehouses become filled with wheat which they must keep until the farmers give them permission to sell it. The grain nearly all goes West to the coast and it is there sent to the sea. The elevator company receives word that two or three ships which they have chartered are in port waiting for their cargoes. The farmers also hear of it and refuse to sell their wheat, so the company is forced to come to us and buy our wheat and are willing to pay a higher price in order not to keep their ships waiting, and in this way we are able to control the market to a certain extent. Before the storage law was passed the elevator companies received grain on one side of the elevator, issued a receipt for it, and passed it right out the other side into the cars and sent it out to market. Thus the wheat would often be made into bread and eaten, while according to the receipt it was still supposed to be in the company's warehouse. The wheat in storage was an imaginary article, and as such the only companies that would insure it were the elevator insurance companies, and the farmer had no other way of knowing whether they were reliable or not. If the farmer wanted his wheat back he probably would have to go to some station several miles down the track to get it, and have to pay the freight back. Now the wheat remains in the elevator until it is actually sold."

Manager Prather of the Alliance warehouse at Pullman claims that the warehouse at Pullman has paid in dividends to the stockholders 25 per cent., besides having placed thousands of dollars in the pockets of farmers in that vicinity by increasing the price of all kinds of grain.

The president of the Farmers' Warehouse Association of Eastern Washington and Western Idaho says: "Our organization is not a corporation but a collector of corporations. We propose to unite all the various warehouse companies in the territory covered by one title together in an association for mutual benefit and general work, without, however, in any way interfering with the work to be done by individual companies. There are about twenty-five warehouse corporations in Eastern Washington and the Panhandle. The Farmers' Warehouses are at Rosalia, Oakesdale, Garfield, Palouse City, Pullman, Four Mile, Johnson, Uniontown, Genesee, Fairfield, Latah, Tekoa, Farmington, Guy, Moscow, Kendrick, St. John, Vollmer, Sunset, Thorn Creek, Dayton and one or two other points which I forget now. We have two warehouses at Garfield, one on each railroad, though both are controlled by the same company, and there are two at Pullman, one leased, I believe. The object is co-operation and a reunion so that we can better control the price of our wheat. The capacity of our farmers' warehouses is about 3,000,000 bushels, so you

see we can control about one-third of the output of our section. We propose to employ a general agent at some central point. He will communicate daily with all the warehouses in the association and find out how much wheat or other grain they have to offer for sale. He will then wire to Tacoma or some other purchasing point that he has, say, 1,000,000 bushels of wheat to offer to-day. When it is sold he will send word to the elevators at each point to ship so much of their wheat to the person he names. Each company has one vote in the association. So you see they are all equal members. The warehouse managers grade the wheat. That is one of the very objects of our association; we wish to establish a uniform grade for all our warehouses. They will then be recognized by buyers and they will know that No. 1 means the same grade of wheat at all the warehouses of the association. This will secure us better prices and surer markets. A company is organized and incorporated in each town. Elevators or warehouses are built for the storage of grain and a charge of 50 cents a ton is made from the harvesting until January 1. After that the charge is ten cents per month. This does not cover insurance, which is extra, and optional with the owner of the wheat. On the delivery of the wheat he gets a receipt for it and can sell it when he chooses on surrendering the receipt. The stock is all held by the farmers.



NEW TRANSFER ELEVATOR AT NORWOOD, N. Y.

But all those who use the elevators are not necessarily stockholders, though very many of them are."

### SONG OF THE DAY.

A small man wearing a black Derby hat and a quiet smile, says a Chicago daily in its "Gossip on 'Change," was overheard practicing the following version of a popular or possibly unpopular "song of the day:"

"Snowstorms come, and rain and hail,  
Damage news in every mail;  
Looks as if there wouldn't be  
Wheat enough for you and me,  
And every day or so they try  
To force 'your Uncle Ed' to buy.  
But he sells shorter week by week,  
And frequently these words doth speak:  
'This-wheat-don't-boom-to-day; this-wheat-don't-boom-to-day.'"

The Illinois Supreme Court has denied a motion to quash the indictments against J. W. Sykes, charged with extensive frauds in elevator receipts at Chicago.

Wheat has been received here that had been threshed, within a few days, from the shock, that was better than would be supposed possible. It was sweet and not badly swollen or sprouted. Although somewhat damp, it would stand shipment very well if moved before hot weather and not left too long without rehandling. An elevator man said he purchased grain from a field in Nelson county, which was in the shock all winter, and it went No. 3. He did not believe it would have graded more than No. 2 last fall. There is grain in shock, standing on low land, which has been completely ruined by the water.—*Minneapolis Market Record.*

### NEW TRANSFER ELEVATOR AT NORWOOD, N. Y.

In the accompanying illustration is shown a perspective view of a transfer elevator built for the New York Central and the Central Vermont Railroad at Norwood, N. Y. This house occupies a ground space of 40x144 feet, cribbed 62 feet, with a five-story cupola on one end, making a total height of 123 feet. The exterior of the building is covered with corrugated iron, and the roof with "Old Process" tin. The foundation under the main portion of the building is composed of solid masonry walls, and those under the cupola are dimension stone piers, all laid on piles.

This house has a transferring capacity of 60 cars in ten hours, and a storage capacity of 200,000 bushels divided in 27 bins, ranging from 4,500 to 9,500 bushels' capacity. The working floor is 40x48 feet and contains two sets of Coker & Metcalf Patent Power Shovels for unloading cars, one car puller, so arranged as to pull cars on either track, and two Metcalf Patent Loading Spouts.

There are two 30-inch belt conveyors. One is located on the top of the bins and fitted with a Macdonald Patent Automatic Traveling Tripper, so that grain may be taken from either hopper and delivered to any bin in the house.

The other one is located under the deep bins and so arranged that grain may be drawn from any bin and delivered to either or both elevators.

The cupola is 36x40 feet and five stories in height. The first story contains the belt conveyor. The second story is the trolley floor and contains what is known as the trolley spouts, which consist of a revolving spout hung close to the scale bottom, the other end of which is mounted on a small trolley which can be wheeled around on top of the floor and made to deliver the grain into the bins.

The third is the scale floor and contains two 1,000-bushel hopper scales of the most improved type manufactured. The fourth floor contains two 1,000-bushel garners, and the fifth or top floor contains all the machinery necessary for operating the elevators.

Power is furnished by a 12"x20" Automatic High Speed Engine and one 60"x14 feet Horizontal Tubular Boiler. The power plant is located in a brick building adjacent to the elevator 24x30 feet and 17 feet in height, with an iron smokestack 125 feet high. The machinery was furnished by the Webster Manufacturing Company of Chicago, Ill., and is of the most improved and modern type, rope drives being used throughout for transmission. The contract was let to the Metcalf-Macdonald Company, grain elevator architects, contractors and builders, of Chicago, Ill.

### REBILLING AT PHILADELPHIA.

The grain dealers did a very sensible thing in appointing a committee to confer with the officers of the Reading Railroad regarding the recent order abolishing the old usage of changing the destination of cars of grain billed to this city. Several of those participating in the debate admitted that the former privilege had been abused to the disadvantage of the railroad. The preamble to the resolution appointing the committee admits that any arrangement upon this subject should be based upon the principle of mutual advantage, and it is probable that the committee by consultation will be accorded an arrangement that will enable grain shippers to fill orders by rebilling and still not require the railway company to hold cars of grain on their side tracks for days at the pleasure and convenience of consignees.—*Times, Philadelphia.*

New Orleans exported in April 1,178,443 bushels corn, 1,801,555 bushels wheat, and 55,205 bushels rye, against 386,946 bushels corn, 387,122 bushels wheat, and no rye in April, 1891, as reported by the grain inspectors of the Board of Trade.



## COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

### SOLD ELEVATOR.

*Editor American Elevator and Grain Trade:*—I have sold my elevator to J. A. Mason of Hastings, Ia., and am now on the lookout for a good plant to buy, or a location on which to build. Inclosed you will please find \$1 for which send me the AMERICAN ELEVATOR AND GRAIN TRADE for one year. Please send me the April number.

Respectfully,  
Guide Rock, Neb. J. M. MARSH.

### WINTER WHEAT IN MANITOBA.

*Editor American Elevator and Grain Trade:*—Spring has come again and our grain and elevator men have had their innings. In most lines of business a man's experience is half his capital, but in the grain trade this is not always the case; and the closing season has been one of disappointment almost throughout. In the first place winter came on earlier than usual, delaying threshing and preventing purchase when there was a reasonable chance to turn over to advantage. When the market began to lower it was not long till many supposed that the bottom had been reached and that wheat was a good investment. The question with regard to such purchases is not settled and the prospects for winter wheat are watched with interest.

We have had a steady winter but pleasant, being much favored with regard to snow compared with the Eastern and Southern portions of the province. While there was enough for sleighing it cleared off without filling the ponds or leaving the land wet for seeding. This week will see wheat seeding about finished. J. W. Sanderson, our most extensive farmer, put in 300 acres one day last week. He is preparing to break some 1,200 acres on the Souris branch of the C. P. R. The opening of this branch through the Southwestern portion of the province and west to the coal fields is causing a boom in immigration in that direction; the sales of land by the C. P. R. reaching as high as 9,000 acres per day.

Respectfully,  
Winnipeg, Man. T. B. FRAZER.

### THE RAILWAY PROBLEM.

*Editor American Elevator and Grain Trade:*—After carefully reading the numerous communications in the April number of the AMERICAN ELEVATOR AND GRAIN TRADE anent the various shortcomings of the railway companies in the matter of lack of cars for loading, delay in transit, and discrimination, I am free to say I think this railway problem is a many-sided question and that the companies are not to blame for the troubles that weigh so heavy on the grain trade.

The cost of transportation and the charge made for it would have to be much increased by the companies if some of the desired reforms were effected. In order to be prepared to furnish shippers any number of cars at any place and at any time demanded the roads would be compelled to keep on hand in different parts of the country an excessive number of cars and other rolling stock at an enormously increased expense which would come out of the shippers, for no company would or could do business at a loss. When prompt shipment becomes so desirable that shippers will be willing to pay high rates then the railways will undoubtedly go to the expense of adding rolling stock, but not before. Some shippers would probably grumble at the high rates, just as they now grudge paying demurrage and car service charges which really tend to the good of both railway and shipper, by paying the former for the use of cars as storage rooms and causing receivers to unload cars promptly, thus keeping them in circulation and giving shippers a chance to use them.

As a practical remedy for delay and scarcity of cars I suggest that the companies make a charge for supplying cars promptly and an additional charge for guaranteeing time delivery at destination, paying damages at once in

case of failure to deliver a guaranteed shipment. By this means those who do not need cars badly will wait until those who need them have been supplied. It seems to me this system would benefit all parties concerned. The charges for such insurance should be regular and should not be changed without due notice. I would like to hear the objection to this plan, if any.

Yours truly, A. G.

### REFUSING TO RECEIVE GRAIN PURCHASED.

*Editor American Elevator and Grain Trade:*—In your issue of April 15 we note a communication signed "Another Shipper," which we think needs a reply. We have been in the trade about twenty-eight years and must say that we have had very little experience such as "Another Shipper" complains of. We can scarcely believe there is a reputable firm in the county that will decline to accept the grain purchased at the contract price when the market has declined, as your correspondent charges. If there is we regard it the duty of every shipper to send the name of that firm to you and request you to publish it with the facts.

The great trouble with a large number of county shippers, as well as dealers, is the carelessness in specifying details in contracts. If the country shipper sell a specific quantity to be shipped within a specific time, and the buyer refuses to honor drafts when made properly and accept the grain taking the chances of the market while in transit, then, the sooner the trade knows the name of that firm the better off all will be. If, however, the shipper sells delivered to destination within a specific time, and although the grain has been shipped promptly, it is delayed in transit beyond the time specified in the contract for its delivery, the buyer is under no obligation to accept the grain at the contract price when it does arrive, but on the day of maturity of the contract a settlement should be made between buyer and seller at the market price, and the difference between that and the contract price is legitimately due the party in whose favor the market price has varied. It is not admitted by reputable dealers, that either buyer or seller has a right to countermand an order after the contract has been consummated.

The terms referring to time of f. o. b. contracts are clearly understood by the trade as follows: Prompt shipment means within ten days. Quick shipment, within three days. Immediate shipment, the day of, or the next business day following, and the bill of lading should show the date as indicated. If the shipper is unable to get cars to load within the time contracted for, he should make that fact clearly known to the buyer, and the buyer should promptly telegraph the position that he proposes to take. He would, under such circumstances, have the right to cancel the contract, extend the time of shipment, or buy in the grain at destination at the time usually required for transportation between the shipping point and destination; and the difference in the market should fix the amount due either buyer or seller and protect both alike. If the market has advanced and the seller has not shipped, and the purchase should be canceled by the purchaser, buying to cover, he gets the benefit of the advance on his grain that was sold and canceled, and he can resell at the enhanced price, which will compensate him for the loss required to fill his contract at destination. If cars cannot be obtained by the shipper and there is no material change in market price, our experience is, that no reputable firm will refuse to cancel without loss, or extend the time.

We believe that the most harmonious feeling should exist between buyer and seller, and each should strive to conform with the wishes and interests of the other.

Yours very truly, MAGUIRE & Co.  
Cincinnati, O.

### NO CHANGE DESIRABLE.

*Editor American Elevator and Grain Trade:*—As to the railways charging more for a short than for a long haul, as instanced by "Kansas Shippers" in the April number of the AMERICAN ELEVATOR AND GRAIN TRADE, I am inclined to think the roads may be justified in their action, the fact that it is a clear violation of the Interstate Commerce Law to the contrary notwithstanding. A branch road costs nearly as much as a trunk line in the first cost of the permanent way; but so much less business is done on the branch that to make it pay the rates must be higher per mile, and if the traffic is light the rates ought to be very high.

Suppose then that A and B are 50 miles apart on a trunk line worked to its fullest capacity; and that a

branch runs from B 50 miles to C, a backwoods town shipping little. The rate on a certain commodity C to B is twenty cents per hundred and B to A two cents, but when a shipment is made from C through, via B, to A, the rate is not twenty-two but nineteen cents. In this case the railway charges twenty cents for carrying fifty miles and nineteen cents for carrying 100 miles, which seems very unreasonable. When the shipments from A to C are considerable the company will have a lot of empty cars at the latter place which are required at A and as the company has to haul the cars anyway it could well afford to make a very low rate on return shipments from C via B to A rather than get nothing. Why not?

Government control is by some thought to be the only solution of the question. I fear these persons have not reflected on the inevitable consequences of such control. Even leaving out of consideration the dangerous possibility of a "political machine" there are other consequences that would be very harmful. As soon as the government bureau got control there would be, in order to reduce expenses, a wholesale discharge of expert railway men who command high salaries (and earn their pay) and in their stead the employment of men inexperienced in the business. After a shorter or longer time it would be found that this force of agents could not give satisfaction to the shippers, in making rates, etc., and the whole country would be plastered with a system of "flat rates" or horizontal tariffs, this being the easiest way out of the tangle of rates. But do we want a system of horizontal tariffs? Such a tariff would place many localities at a decided disadvantage. Thousands of prosperous business interests built up at great expense would be ruined forever.

With shaded rates given secretly to certain shippers put a stop to, and some other abuses corrected, I think the present method of conducting the railway business is good and should not be condemned. Grain stealing and shortages at terminal points could be put a stop to by the united and determined action of the grain men. Spasmodic effort by a few individuals will hardly suffice to convince the railways that a reform is desirable. This matter of shortage and stealing is of vital importance to grain men. It behooves them to look after their interests for no one else will. These matters should be agitated, to get others interested. As an instance of the value of agitation take the anti-option bills which resulted from a concerted howl by the farmers. The grain men with real grievances should be able to get the attention of those in power with much better results than the farmers who really had no grievance. Hoping to hear from others, I am,

Very respectfully yours, O. S. W.

### THE METRIC SYSTEM.

The agitation promoted by the Decimal Association has led the Education Department of the British government to require that the principles of the metric system be taught in certain grades of the primary schools. As is well known, the Associated Chambers of Commerce have declared in favor of the decimal system.

The report of the International American Conference on the metric system has naturally attracted attention in England. This report recommended the adoption by the United States of the metric system, which is now in use by the governments and people of all the other American Republics as well as most of the nations of Europe, and which is already authorized by the United States. In transmitting this report Secretary Blaine said that the adoption of the system in the customs service would in his opinion greatly promote the public convenience.

A grain firm has won a suit against the railroads of Iowa which sustains the rates made by the State Railroad and Warehouse Commission which the railroads had refused to adopt.

The shortage in grain cargoes unloaded at Buffalo last year was very considerably less on those hailing from Chicago than on cargoes from any other American port, except Detroit, and Detroit shipped to Buffalo only one-fifty-seventh as much as Chicago.

Nebraska in 1889 produced 1,322,111 bushels barley on 82,560 acres, 120,000 bushels buckwheat on 15,385 acres, 215,805,956 bushels corn on 5,480,179 acres, 43,143,000 bushels oats on 1,503,515 acres, and 1,085,083 bushels rye on 81,372 acres, a total of 285,000,000 bushels grain produced on 7,661,969 acres, compared with 88,039,600 bushels on 3,503,186 acres ten years before.



**"THE FARMERS' COMPLAINT JUSTIFIED."**

Under the above head the *Pioneer Press* of St. Paul has published what it claims to be the result of a thorough investigation of the subject. It says:

The assertion has been made with pertinacious repetition that the farmers of the Northwest have been and are being deprived of a portion of their rightful profits; that combinations exist by which the price of wheat at the elevator nearest the farm is far less than the price of it in the principal markets of the world, less the cost of transportation from the field to the point of final sale. This charge has been made and reiterated by many men of different opinions concerning the farmer and his interests. Not all of them have agreed by any means upon the spot where the leakage occurs. Some think that the guilt lies with local elevator men, who combine to depress prices, buying on a low range and selling at a handsome profit as soon as the grain is within their reach. Still more believe that the shrinkage is due to extortionate charges by the railroads, and from this have arisen repeated demands for reductions in freight rates. To this day it would be found impossible to persuade large numbers of people, even if they were shown Northwestern schedules of freight rates on grain, set side by side with the rates prevailing in other parts of the country, that the farmer is not the helpless victim of railroad monopolies, who consume what ought to be the proceeds of his labor in unjust and unreasonable charges for carriage. Others, again, find the difficulty in the elevators at terminal points and primary markets; where, as they assert, grain is so manipulated and prices are so arranged that the bulk of the profit goes into the hands of great corporations. And finally, still another class of people see, in the existence of speculation in food products, the cause of a shrinkage in prices between the farm and the market, and execrate the "bear" interest for its alleged work in keeping the market price of American grain several cents per bushel below what it ought to be, by comparison with English quotations. All these different explanations are offered; but the thing which they are supposed to explain remains the same, and is advanced by all as an axiom. This is the supposition that the wheat product of our fields is sold by the farmer for less than he ought to receive in a free market; that somehow and somewhere there is a depreciation which puts into other pockets a portion of the price of his grain.

The first item of this study is the matter of comparative prices. These prices have been calculated by monthly averages for the last four months of each of the years 1889, 1890 and 1891.

The New York prices are for No. 2 Red Winter Wheat, the standard. The prices at Minnesota and other Northwestern points are those of the grade of No. 1 Northern, our market standard, except in the case of Duluth, where the prices are for No. 1 Hard. This requires an average deduction of from two to three cents per bushel from the Duluth figures to make a fair comparison with other points.

**WHEAT PRICES.**

	September.			October.		
	1889.	1890.	1891.	1889.	1890.	1891.
Liverpool—						
No. 2 red winter	\$0.7696	\$1.0459	\$1.1547	\$0.9933	\$1.0440	\$1.1796
No. 2 spring	1.0128	1.0785	1.2840	1.0231	1.0975	1.2720
New York	.8512	1.0370	1.0462	.8487	1.0775	1.0550
Chicago	.7737	.9993	.9500	.8000	.9990	.9512
Minneapolis	.7751	.9728	.9236	.7732	.9712	.9176
Duluth	.8062	1.0570	.9451	.8173	1.0340	.9612
Crookston	.6123	.8026	.7693	.6130	.8080	.7880
Fargo	.6350	.7990	.7975	.6200	.8250	.7950
Huron	.5500	.6900	.7300	.6000	.7300	.7500
Aberdeen	.6275	.8100	.7725	.6200	.8250	.7900
	November.			December.		
	1889.	1890.	1891.	1889.	1890.	1891.
Liverpool—						
No. 2 red winter	\$0.9786	\$1.0630	\$1.2430	\$0.9852	\$1.0560	\$1.2120
No. 2 spring	1.0380	1.1078	1.2580	1.0200	1.0990	1.2170
New York	.8443	1.0437	1.0706	.8575	1.0570	1.0700
Chicago	.7962	.9986	.9350	.7800	.9225	.9100
Minneapolis	.7545	.9060	.8836	.8124	.9561	.9249
Duluth	.7991	.9551	.9223	.7849	.9050	.8845
Crookston	.6003	.7403	.7460	.6109	.7064	.7242
Fargo	.6100	.7475	.7800	.6200	.7050	.7600
Huron	.5800	.6400	.7500	.5500	.6800	.7200
Aberdeen	.6100	.7400	.7500	.6150	.6750	.7350

The first point for scrutiny is a comparison of market with market. Whatever difference between the price of wheat in Minneapolis and in Liverpool, for example, exists in one season should exist approximately in another, unless there has been an extraordinary variation in freight rates. If we take the month of September and select the grade of No. 2 Spring Wheat at Liverpool, as representing the quality of hard wheat received there from the American Northwest, we find that the price in Liverpool was over 16 cents greater than the New York price in 1889, only four cents greater in 1890 and nearly 24 cents greater in 1891. This fluctuation is immense. And turning to a table of ocean freights for this month, compiled expressly for the purpose of this article through the courtesy of the Northern Steamship Company, we get a rate for September, 1889, of 10 cents per bushel on the average; of but 1.578 cents for 1890, and of 9 cents for 1891. While these rates vary as the prices do, they are out of all proportion; the margin of Liverpool price as compared with New York price being, for September, 1889, some 6 cents over and above the cost of the ocean passage; for September, 1890, about 2.5 cents, and for September, 1891, 15 cents. Comparing New York prices with those of Minneapolis for the same period, we find a difference, to cover cost of transportation and expense of handling, of 7.6 cents for September, 1889, of 6.5 cents in 1890, and of 11.8 cents in 1891. Here, again, the difference for 1891 is suggestively larger than that for either of the other two seasons. Going back one step further yet, and comparing prices at Fargo and at Duluth for the three years, there is another variation; the Duluth price being 17 cents higher than that of Fargo in September, 1889, 26 cents higher in 1890, and 15 cents higher in 1891. After allowing two or three cents a bushel for the difference of grades compared, this is still a great discrepancy.

It is now in order to take a bushel of wheat from the shipping point nearest the farm, and travel with it to the great central grain market of the world, paying the charges on it as we go, and noting the increase in its selling value.

Beginning with Crookston as a primary market, the price of wheat there for October, 1889, is given at 61 3 cents per bushel. By the time this wheat reaches Minneapolis it sells for 77 cents, and at Duluth for about 78 cents, deducting from the tabulated price for a difference of grades. That is to say, the Crookston price is from 16 to 17 cents less than the Duluth and Minneapolis price. But the freight rate from Crookston to Duluth or Minneapolis is 17½ cents per hundred, or 10½ cents per bushel. A similar difference of about 17 cents prevailed in 1890, and of only 13 cents in 1891. This shows a nearer approximation of price at one point to price at another, plus the freight rate between them, than in former seasons. The margin over and above the freight rate in other years seems to be in excess of all reasonable charges for handling. For November the difference was 15 cents in 1889, 16 in 1890 and 14 in 1891; and for December the Crookston and Minneapolis prices varied by 20 cents, 25 cents and 20 cents in the three years respectively. As these are not daily prices which are compared, but average prices for months, this difference is practically a stable one. And why it should thus increase with the season, rising to from 20 to 25 cents in December, or more than double the freight rate between the two points, is a question for some one to answer.

Our bushel of wheat is now at Duluth, and was worth there, in the present season, deducting an average of three cents per bushel from the prices given in the table, to cover the difference between the grades of No. 1 Hard and No. 1 Northern, 91½ cents in September. It was worth in that month \$1.04 in New York, or 13 cents more. But the freight rate on wheat from Duluth to Buffalo for September averaged 3 11-16 cents, and from Buffalo to New York the canal rate averaged about 4½ cents. The total freight charge to tidewater was, therefore, approximately 8 cents per bushel; and the remaining 5 cents difference in price goes to the account of insurance and other charges and to the expense of handling in Buffalo. The difference between the New York and the Liverpool price for the same month was nearly 24 cents while the cost of ocean carriage, as we have seen, was only 9 cents and a small fraction. There does not seem to be any legitimate margin such as this for the satisfaction of all risks in transit and the cost of transferring in New York. To sum it up, the difference between Minneapolis price and Liverpool price in September of this year was 36 cents per bushel. To

cover this we have freights, lake, canal and ocean, aggregating about 17 cents. Elevator and loading charges at Duluth run from 1¼ to 1½ cents per bushel. Transshipment and elevating charges on the way would amount to about two cents per bushel additional. Adding delivery charges at Liverpool, incidentals and losses, we have a total for everything covering the entire journey from Duluth to Liverpool of say not more than from 27 to 28 cents per bushel at the most liberal estimate. With a difference of 36 cents per bushel in the average market price for the month, it seems reasonably clear that from eight to ten cents per bushel is lost in the transfer; since the allowances made cover freights, transfers, elevator charges, primage, insurance and all incidentals, leaving only the interest on capital invested to be accounted for.

Taking, now, the month of October in the year 1891, we find that a bushel of wheat at Fargo was worth 79½ cents and at Minneapolis 91¼ cents, a difference of 12¼ cents; while the freight rate on wheat between these points was 16 cents per 100 pounds, or 9.6 cents per bushel. Again there is a fair margin for the costs of storage and handling. The Duluth price for the month ranges somewhat higher, even after allowing for the different grade priced there. But the difference between the Minneapolis price and the New York price for the month of October is 13¼ cents, and that between Duluth and New York something less. Now, for this month of October, 1891, the average freight rate from Duluth to Buffalo was 3 5 16 cents per bushel; while the canal rate from Buffalo to New York was from 4¼ to 4¾ cents per bushel. This gives a total freight charge of about 7½ to 8 cents per bushel from Duluth to New York, leaving nearly as much more for insurance and for terminal charges and transfers at Buffalo; a difference which will hardly strike the public as necessary and reasonable. In this same month the average price of No. 2 Spring Wheat at Liverpool was over 21½ cents higher than at New York; yet the average ocean freight rate for that month was only 11 cents per bushel. If there is allowed, as before, 2 cents for elevating charges at New York, ½ cent for insurance there in store, and say 7 cents per bushel for Liverpool delivery, ocean insurance and incidentals, this difference is accounted for; but this is only by an estimate which makes the incidental way charges equal to the entire ocean freight rate, and is hardly reasonable even if it be correct.

In the month of November the Fargo price was 10 cents below that of Minneapolis, again the practical equivalent of the freight rate. The New York price was about 19 cents above the Duluth or Minneapolis market, while the lake freight rate averaged 7¾ cents per bushel, and the canal rate was between four and five cents per bushel to the close of navigation, when the current all-rail rate rose at once to 7 cents. This gives a maximum cost of movement to the seaboard of 14 to 15 cents per bushel, to which, if we add elevator charges and transfers, at a fair estimate, we shall obtain something near the New York market price. In this month the average price at Liverpool ranged 18 cents above New York; while the ocean rate was 12 cents per bushel. The margin here is much smaller; sufficiently so to show that, if there was a profit in handling the grain at these figures, somebody was making more out of it than was right in the preceding month.

Finally, we may take the winter month of December, when prices were settled and navigation was entirely closed. In December a bushel of wheat at Fargo was worth 20 cents less than at Minneapolis, a difference too great to be accounted for by the freight rate. The Duluth price was less advantageous, the lakes, being closed to steamers, and shipments being subject to storage. The New York price was 15 cents per bushel higher than the Minneapolis average, which would fairly meet the cost of all rail transportation. And the Liverpool price was 14.7 cents above that of New York, while the ocean rate had fallen to a little less than ten cents per bushel. As before, the indications of these figures are that, during the season of heaviest rush of wheat to market, the difference of price between any two markets is more in excess of the freight rate between them, plus reasonable terminal charges, than at any other time. And there does appear to be a larger shrinkage in the value of the wheat between the farm and the ultimate market, a very much larger shrinkage, than can be accounted for by allowing for transportation charges and then assigning a liberal amount for all other expenses and for the trouble of handling. To make the matter perfectly clear, and to assist the reader in figuring out the question for himself,



the following tables are added, showing the difference of prices between the principal markets in the months of September and October for three years, and the freight rates on the lakes, by canal and on the ocean, in force during these seasons:

## DIFFERENCES IN PRICES.

	September.			October.		
	1889.	1890.	1891.	1889.	1890.	1891.
Crookston and Minneapolis	16	17	16	16	16	13
Duluth and New York	8	1	13	6	7	12
New York and Liverpool	16	4	24	17½	2	22

## AVERAGE FREIGHT RATES.

Duluth to Buffalo:				
	Sept.	Oct.	Nov.	Dec.
1891.....	3 11-16	3 5-16	7 <sup>5</sup> / <sub>8</sub>	....
Buffalo to New York:				
1889.....	Average for season, 4.8			
1890.....	Average for season, 3.8			
Buffalo to New York:				
	Sept.	Oct.	Nov.	Dec.
1891.....	4 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	4 1-6 to 6 <sup>1</sup> / <sub>2</sub>	7 <sup>1</sup> / <sub>2</sub>
New York to Liverpool:				
1889.....	10.2	11.5	10.0	10.2
1890.....	1.6	1.0	4.2	4.5
1891.....	9.0	11.0	12.3	9.8

## Queries and Replies.

Questions and answers are inserted under this head free of charge and all are invited to avail themselves of this column.

**No. 30. Strength of Bin Bottoms.**—I notice that J. C. Lipsett of Winnipeg, Man., asks in No. 27 of "Queries and Replies" in the March number of the AMERICAN ELEVATOR AND GRAIN TRADE for a reason why weak bin bottoms do not break out when so heavily laden that if the total weight of the grain were applied to the bottom it (the bottom) would break. I so understand his question, which seems to me not well put. The reason is that when a tall bin is full of grain a great part of the weight is carried by the sides of the bin, which are usually so rough as to partly hold up the grain, thus relieving the bottom. The rough boards hold up the grain along the sides, and this layer of grain holds up that which is further away from the wall of the bin by virtue of the friction of the kernels one against the other. This friction is considerable. Without it we could not pile up grain on a flat floor; and how much greater must it be when the whole mass is closely compacted between the walls of a bin. With flaxseed, however, much of the weight will come on the bin bottom.—J. L.

## WHEAT RECEIPTS AT PRIMARY MARKETS.

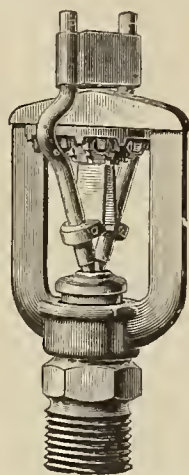
The receipts at primary markets from July 1 to May 7 during the last three years were as follows:

	1891-92.	1890-91.	1889-90.
St. Louis.....	25,189,000	10,999,000	13,691,000
Toledo.....	18,780,000	5,201,000	6,017,000
Detroit.....	7,203,000	4,392,000	4,853,000
Kansas City.....	13,513,000	6,112,000	5,217,000
Cincinnati.....	2,280,000	1,110,000	1,412,000
Winter wheat.....	66,765,000	27,714,000	31,190,000
Chicago.....	44,244,000	13,003,000	18,188,000
Milwaukee.....	10,984,000	6,752,000	6,458,000
Minneapolis.....	59,169,000	44,945,000	42,237,000
Duluth.....	46,455,000	15,199,000	17,688,000
Spring wheat.....	160,852,000	79,906,000	84,571,000
Winter wheat.....	66,765,000	27,714,000	31,190,000
Total, 45 weeks...	227,617,000	107,620,000	115,761,000

Mrs. Gumpss—"You remember the last time you drank too much, and was so awfully sick you put all your money in my name, and made me promise that if you ever took another drink I'd put you right under the Keeley cure." Mr. Gumpss—"Yes, my dear." "Well, you were drinking again yesterday, and so I went right down to Catchem & Cheatem's and invested the money in Keeley stock." "Stock?" "Yes, Keeley motor stock, you know. They said all you had to do was not to take another drink till the motor began to mope, and you'd be cured."—*New York Weekly*.

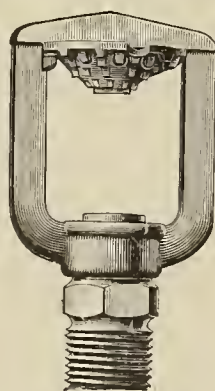
## THE BEST PROTECTION AGAINST FIRE.

Every property owner is directly interested in the subject of which we are about to speak—that of automatic fire extinguishers, and that such devices, when they work successfully, are invaluable to every manufacturer and business men in general goes without saying. Hundreds of thousands of dollars are saved annually to the owners of buildings and to merchants and others doing business in and occupying the same, by automatic fire extinguishers. In addition to reducing the losses from fire to a minimum, these devices, when they are known to work successfully, are indorsed most emphatically by insurance underwriters, and in consequence the cost of insurance is very materially reduced, so much so, in fact, that in a very short time the saving pays the cost of equipping a building with sprinklers.



SPRINKLER CLOSED.

Without entering into any comparison of the various automatic fire extinguishing devices that have been offered to property owners during later years we can safely assert that the Neracher & Hill Sprinkler Company of Warren, O., manufacture an automatic sprinkler that for simplicity of construction and certainty of action is as near perfection as has ever been attained. With the Neracher & Hill system the distributing pipes are run through a building under the ceilings, and are filled with water under pressure from the street mains or from a



SPRINKLER OPEN.

tank on the roof of the building. The automatic sprinkler is attached to these distributing pipes at intervals of about ten feet, which brings them near enough together to insure protection to every inch of floor and wall space in the entire building.

The sprinkler itself is constructed upon thoroughly scientific principles, and so exact is it in every detail that a failure to respond at the right time is an absolute impossibility. With the Neracher & Hill Sprinkler the valve is held to its seat by several independent parts that combine to form a pair of toggle arms. These toggle arms (as will be seen in the illustration) are so arranged as to hold the valve securely to its seat while but a slight stress is exerted upon the link that holds the arms in place. This link is made of material that melts at a very low temperature, in fact, the most incipient fire causes it to melt and open the valve, thereby releasing a spray that never fails to arrest the fire before it has had a chance to do serious damage. The working of the Neracher & Hill Sprinkler is absolutely certain, it literally makes the fire put itself out. It cannot be affected by corrosion, and it is on hand and ready at all hours, day and night, to arrest and extinguish any fire that may start independent of the presence of human beings. It is so simple that there is no way for it to get out of order. It is in use in hundreds of mills, manufactories, shops, offices and mercantile buildings, etc., throughout the country, among them: The White Sewing Machine Company, Sturte-

vant Lumber Company, Buckeye Oat Meal Company of Cleveland, O.; the Meader Furniture Company, Victoria Cordage Company, the F. Obermayer Foundry Supply Manufacturing Company of Cincinnati, O.; the Bucyrus Foundry Manufacturing Company, Bucyrus, O.; the World's Museum Company, Columbus, O.; the F. Schumacher Milling Company, Diamond Match Company, Akron, O.; Studebaker Bros. Manufacturing Company, South Bend, Ind.; A. H. Andrews & Co., Crane Elevator Company, Chicago, Ill.; Grand Rapids School Furniture Company, Grand Rapids, Mich.; A. F. Bartlett & Co., East Saginaw, Mich.; Buckstaff, Edwards & Co., Oshkosh, Wis.; Lake Superior Elevator Company, Duluth, Minn.; Kentucky River Mills, Lawrence, Mass., and a host of others.

No building where water pressure is in any way obtainable should be without the Neracher & Hill Automatic Sprinkler System. Illustrated catalogues and all desired information can be secured by those interested by addressing the Neracher & Hill Sprinkler Company, Warren, O.

That automatic sprinklers are the best protection against fire now known to the civilized world is being demonstrated every day. The Neracher & Hill Sprinkler Company have just received the following letter from the Davis Company, agents at Moline, Ill., in reference to the recent fire at the works of the Deere & Mansur Company in that city:

NERACHER & HILL SPRINKLER COMPANY, Warren, O.

Gentlemen:—Send you by mail to-day the remains of two sprinklers which we took out of Deere & Mansur Company this morn'g; also mail you a copy of our daily papers, giving an account of the fire and what the sprinkler did for them. One of these sprinklers the fire acted upon and the other was demolished with a club.

When the fire was discovered they started up stairs with their hose, and had not enough to reach, so they ran to the place and found the little sprinkler "getting in its work" in great shape, and as there was not fire enough to set off the other sprinklers around it and the watchman thinking that he ought to have more water on it, and the hose not being long enough to reach, he went to work on this second one with a club (bright man). Every one is highly pleased with the work this did last night. Their loss will not exceed \$10 or \$15. The water had been on this job just 48 hours.

The work of the sprinklers has been equally effective in numerous other cases and they have saved thousands of dollars' worth of property. The reduced cost of insurance on risks equipped with good automatic sprinklers in many cases amounts to more than the annual interest on the capital invested in the sprinklers. A good sprinkler equipment is a safe and judicious investment, it matters not where or by whom it is made, and always proves a profitable one.

The insurance companies may reimburse elevator owners for part of their loss on grain, buildings and machines, but the loss of business caused by enforced idleness, trouble and the many inconveniences attending are never paid for. In this day no elevator man can afford to be without sprinklers.

## NEW ORLEANS AS A GRAIN EXPORTER.

The New Orleans *Picayune* says that "in the first seven months of last commercial year there was exported from New Orleans the amount of 1,510,284 bushels of corn; in the first seven months of the present year there was exported the quantity of 4,391,557 bushels—nearly three times as much. In the first seven months of last commercial year there was exported via the Crescent City the somewhat meager quantity of 869,592 bushels of wheat; in the first seven months of the current year there were exported 10,109,107 bushels—nearly twelve times as much." It then adds: "There are only two things needed to make New Orleans the foremost port of export of grain from the United States, and those two requisites are, neither of them, of very difficult attainment. There are adequate elevator facilities at this point, and continuous deep water navigation between St. Anthony's Falls and the Gulf on the one hand, and between Pierre, S. D., and the Gulf on the other."

The Minnesota State Grain Inspection Department earned in March \$11,094.



## INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector P. Bird Price the grain received at Chicago during the month of April was graded as follows:

## WINTER WHEAT.

Railroad.	White.			Hard.			Red.				No Grade.
	2	3	4	2	3	4	2	3	4		
C., B. & Q.					10		14	8	12		2
C., R. I. & P.					4		4	3	13		
C. & A.	1	1					2	40	12		
Illinois Central.					2		6	24	6		1
Galena Div. N. W.											
Wis. Div. N. W.	3	1					18	1			
Wabash.							4	2			
C. & E. I.		1					4	1	3		
C., M. & St. P.	2	1	1		6		37	19			
Wisconsin Central.											
C., St. P. & K. C.					3			2	5		
A., T. & S. Fe.	2	5	1		67		3	6	47		
Through & Special.					25		125	155	4		
Total each grade.	5	5	2		119		217	261	104		3
Total W. wheat.											724

## SPRING WHEAT.

Railroad.				No Grade.	White.		Mixed Wheat.
	2	3	4		2	3	
C., B. & Q.	4	28	12				59
C., R. I. & P.	1	8	26				8
C. & A.	34	40	3				2
Illinois Central.	1	1	1				
Galena Div. N. W.	1	61	14				3
Wis. Div. N. W.			2				
Wabash.							
C. & E. I.							
C., M. & St. P.	33	41	24	39			7
Wisconsin Central.			1				
C., St. P. & K. C.			30	2			
A., T. & S. Fe.							
Through & Special.	669	220	97	83			8
Total each grade.	743	429	182	126			87
Total Spg. wheat.							1,568

## CORN.

Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C., B. & Q.	91	260	7	38	212	810	216	5
C., R. I. & P.	12	87	5	7	16	307	82	3
C. & A.	140	55	48	14	92	74	6	1
Illinois Central.	342	348	76	55	90	140	124	1
Gal. Div. N. W.	28	66	3	9	15	83	124	2
Wis. Div. N. W.								
Wabash.	146	35	29	13	39	30	12	
C. & E. I.	49	74	1	7	14	76	14	2
C., M. & St. P.	5	17			8	130	108	14
Wis. Central.								
C., St. P. & K. C.	3	31	1	6	14	155	24	
A., T. & S. Fe.	27	114	6	12	96	324	52	
Thrh'g & Spl	12	35	25	13	95	83	80	
Total each grd	855	1,122	201	174	691	2,212	842	28
Total corn.								6,125

## OATS.

Railroad.	White.			2	3	White Clipped.	No Grade.
	2	3	4			2	
C., B. & Q.	272	254	120	71	9		
C., R. I. & P.	10	464	46	120	7		
C. & A.	132	31	86	21			
Illinois Central.	156	182	353	61	1		
Galena Div. N. W.	108	381	53	177	1		3
Wis. Div. N. W.	42	97	6	11	1		1
Wabash.	81	78	42	20	10		
C. & E. I.	6	25	29	5			
C., M. & St. P.	167	540	75	149	2		1
Wisconsin Central.	2	1					
C., St. P. & K. C.	21	125	37	23			
A., T. & S. Fe.	39	94	61	29			
Through & Special.	226	248	14	30	20	2	1
Total each grade.	1,262	2,520	922	717	51	2	6
Total oats.							5,480

## RYE.

Railroad.				2	3	No Grade.
	2	3	4			
C., B. & Q.				20	10	
C., R. I. & P.				12	8	
C. & A.				1		
Illinois Central.				7	1	
Galena Div. N. W.				15	2	
Wisconsin Div. N. W.				8		
Wabash.					6	
C. & E. I.				1		
C., M. & St. P.				8	4	
Wisconsin Central.						
C., St. P. & K. C.				4		
A., T. & S. Fe.						
Through & Special.				125	44	
Total each grade.				201	75	
Total rye.						276

## BARLEY.

Railroad.	Bay Brewing.				No Grade.	Total No. Cars by Each Road.
		3	2	3		
C., B. & Q.				54	25	3
C., R. I. & P.				27	41	15
C. & A.				1	2	
Illinois Central.				22	17	2
Galena Div. N. W.				2	46	61
Wis. Div. N. W.				15	167	64
Wabash.						3
C. & E. I.						
C., M. & St. P.				9	148	37
Wisconsin Central.	6				1	
C., St. P. & K. C.				11	3	
A., T. & S. Fe.					1	
Through & Special.				1		
Total each grade.	6	26	477	252	52	11
Total barley.						824

## EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from Atlantic ports during the two weeks ending May 7, as compared with same weeks last year, have been as follows:

	For week ending May 7.		For week ending May 9.		For week ending April 30.		May 2.	
	1892.	1891.	1892.	1891.	1892.	1891.	1892.	1891.
Wheat, bu	2,258,800	768,900	2,602,500	433,300				
Corn	2,332,100	222,900	2,116,200	307,500				
Oats	701,500	2,500	260,500	4,000				
Rye	228,000		51,000					
Flour, bbls.	334,700	209,000	250,100	199,300				

## RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during April, 1892 and 1891, of seeds, hay and broom corn:

Receipts.	Timothy lbs.	Clover, lbs.	Other grass seeds, lbs.	Flax-seed, bu.	Broom corn, lbs.	Hay, tons.
1892.	3,898,460	794,246	1,168,407	617,049	161,200	12,440
1891.	6,737,686	987,575	934,650	336,408	780,477	15,508
Shipm'ts.						
1892.	4,706,388	512,857	1,254,387	740,227	937,273	2,151
1891.	4,403,739	983,275	1,429,810	549,165	566,503	2,200

## VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, May 7, 1892, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany.		6,000	23,000	5,000	
Baltimore.	611,000	600,000	92,000	85,000	
Boston.	244,000	38,000	65,000	3,000	10,000
Buffalo.					
do afloat.					
Chicago.	7,661,000	1,629,000	896,000	316,000	17,000
do afloat.					
Cincinnati.	6,000	1,000	35,000	2,000	26,000
Detroit.	90,000	14,000	32,000	7,000	14,000
do afloat.					
Duluth.	9,980,000				
do afloat.					
Indianapolis.	26,000	25,000	49,000	1,000	
Kansas City.	344,000	52,000	10,000	9,000	
Milwaukee.	267,000	8,000	6,000	32,000	73,000
do afloat.					
Minneapolis.	8,354,000		29,000		3,000
Montreal.	689,000		512,000	40,000	103,000
New York.	1,295,000	385,000	504,000	101,000	49,000
do afloat.				8,000	
Oswego.	30,000				2,000
Peoria.	23,000	50,000	46,000	12,000	
Philadelphia.	188,000	358,000	135,000		
St. Louis.	290,000	276,000	67,000	6,000	11,000
do afloat.		49,000			
Toledo.	237,000	82,000	81,000	66,000	
Toronto.	129,000	11,000			104,000
On Canals.	350,000	48,000		61,000	20,000
On Lakes.	4,657,000	857,000	695,000	90,000	
On Miss. River.		165,000	27,000		
Grand total.	36,190,000	4,902,000	3,531,000	869,000	503,000
Same date last year.	20,853,205	3,717,781	2,629,781	414,671	649,592

A farmer's wife died from eating cucumbers grown from seed furnished by the Agricultural Department, and the next season Secretary Rusk was requested by the bereaved husband to send him a wife instead of more seed.

## Trade Notes.

"Little drops of printer's ink,  
A little type 'displayed,'  
Make our merchants princes  
And all this big parade."

Schleicher, Schumm & Co., proprietors of the "Otto" Gas Engine Works of Philadelphia, have opened an office in Boston at 19 Pearl street.

You cannot wind up your store, office, or counting-room like a clock and set it going to profit and success. One's vocation is like the bicycle, it must be pushed all the while.

Thornburgh & Glessner, manufacturers and dealers in mill and elevator supplies at 110 and 112 South Jefferson street, Chicago, have been succeeded by The Thornburgh Manufacturing Company.

Thos. Kane & Co. of Chicago have issued a new catalogue of the Racine Automatic Engines and Boilers, steam launches and yacht fittings. It contains some pretty launch illustrations.

The greatest advertisers in the country, whether from principle or anything else, are becoming honest advertisers, and those which express the most honesty in their advertisements are the ones which get the most dollars.—*Chicago Herald.*

"Times are too dull to advertise." Times are never too dull to advertise. The duller the times the more advertising you need. Frequently you can create a demand for your goods by advertising when your competitors think times are too dull to advertise.

The H. W. Caldwell & Son Company has been incorporated at Chicago, to manufacture machinery, succeeding the well-known firm of H. W. Caldwell & Son. The new company has a capital stock of \$200,000. The incorporators are Henry W. Caldwell, Oliver N. Caldwell and Frank C. Caldwell.

The Neracher & Hill Sprinkler Company, Columbus, Ga., and Warren, O., has succeeded the Hill Automatic Sprinkler Company, and the Neracher Sprinkler Company, with a paid up capital of \$400,000. This company are now operating the works at Columbus, Ga., and Warren, O., in the manufacture of fire protective apparatus, and are erecting their apparatus ready for use. Agencies have been established in all the principal cities—the Southern headquarters being at Columbus, Ga.

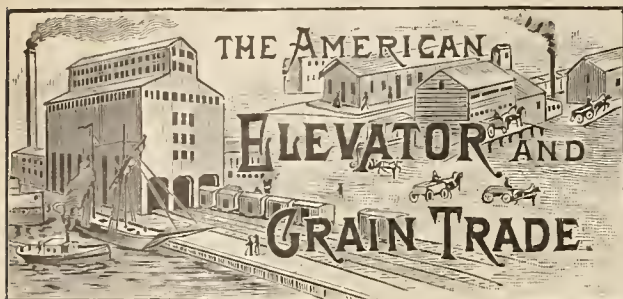
"I need my money for something besides advertising." Impossible. He that has a demand for goods always secures capital enough to manufacture and handle them. Advertising creates a demand. It is better to have money for your advertising and thus place yourself in the possession of orders for your goods even though you have to hire capital to manufacture them with, than it is to have them lie idle awaiting a sale which will never come because you did not have the money to advertise them with.

For the convenience of their patrons the York Foundry and Engine Company of York, Neb., has decided to carry in stock a complete line of engines and boilers (up to 80-horse power). They are just now receiving two carloads of the well known Erie City Iron Works' engines and boilers. The grain men of the West can now have complete outfits with the motive power furnished from their stock on a few hours' notice. Intending purchasers are invited to call and see their machinery before purchasing elsewhere.

In our observation of the many trade catalogues coming under our notice for review, we have been forcibly impressed with the enterprise, skill and amount of capital expended in these numerous and frequently costly publications. The highest kind of art is utilized, the literary matter is more or less excellent, while the prodigal distribution of these advertising gems entails an expenditure of time, talent and money that in the face of possible returns requires an immense amount of faith and the option of anticipating a watermelon with but a gooseberry return.

A farmer near Fergus Falls, Dak., raised 1,000 bushels of popcorn last year, says the *Journal* of that place, and stored it in a barn. The barn caught fire, the corn began to pop and filled a ten-acre field. An old mare in a neighboring pasture had defective eyesight, saw the corn, thought it was snow and laid down and froze to death.





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## MITCHELL BROS. COMPANY.

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A. J. MITCHELL, - - - Business Manager.

HARLEY B. MITCHELL, - - - Editor.

### ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

### CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., MAY 15, 1892.

### GRAIN VIA CANADIAN CANALS.

The discrimination by the Dominion Government in levying tolls on the Welland Canal is causing considerable ill feeling and discussion. Grain shipped from the West to Montreal for export via water must necessarily be transhipped from lake vessels to river barges at some point on Lake Ontario. At two points only are facilities provided—Kingston, Ontario, and Ogdensburg, New York. To reach either of these points, grain must pass through the Welland Canal, where the Dominion Government levies a toll of 20 cents per ton. If transhipped at Kingston, where the facilities are inadequate, a rebate of 18 cents per ton is given. If transhipped at Ogdensburg no rebate is given.

It is clearly a discrimination against an American port and the Interstate Commerce Commission has decided that it is a violation of the canal clauses of the Washington treaty and recommended as a measure of justice that the Sault Ste. Marie Canal should no longer be open to Canadian vessels. It has also been reported that the President would advise Congress to take such action. The discrimination is without doubt an unjust one, but, closing the Sault will not help matters in the least; the Dominion Government would reciprocate by closing the Welland to American vessels, which would further embarrass our export grain trade and serve to advance the interests of the New York elevator pool. Free passage through Canadian canals for all vessels is necessary for the encouragement of our export grain trade via Montreal but a tit-for-tat policy is not the one to use in obtaining it, or passage on equal terms either.

It is to the interest of the export grain trade of both countries and greatly to the interests of Montreal dealers and handlers that everything be done to induce the grain to seek that route. The proposition that an agreement be made between

the two countries whereby the Welland and St. Lawrence Canals shall be deepened and free passage given vessels of citizens of either country is worthy of every grain shipper's support; the one of retaliation is not.

By deepening these canals a shorter route to the United Kingdom would be obtained and the ocean carrying trade could be thrown into the hands of Canadian and American companies by levying prohibitive tolls upon vessels of other countries. The exportation of grain would be facilitated, shipments expedited, freight reduced and the New York elevator pool be made harmless for at least eight months of every year.

### THE HATCH BILL.

It is said that the decks are almost cleared for action at Washington for the debate on the Hatch Option Bill which is expected to come up the present week. Mr. Hatch has refused, it is said, to give way to any further measures, and claims that more members of the House are in favor of his bill than of any other measure of proposed legislation. When the debate begins we may expect a full week of oratory and the probable passage of the bill, by the House at least, and probably by the Senate also. There seems to be a general disposition at Washington "to do something for the farmer," and the average congressman has no conscience, only constituents, to satisfy. The Hatch Bill seems to meet the case, and it will probably be the Hatch Bill, more's the pity.

### NEBRASKA GRAIN DEALERS' ASSOCIATION.

The grain dealers of Nebraska have at last set to work in a businesslike way to organize an active association, and instead of depending upon each other to do the work, they have done one of the things necessary to the success of the association—they have employed a secretary to work for and in the interests of the association. Every dealers' association should have the entire time of one active and progressive worker.

At the first meeting, an account of which is published elsewhere in this issue, it was found that over one-third of the elevators of the state were represented, and those present were confident that the majority of the elevators of the state would soon be represented. Self interest should prompt every dealer of the state to join the association and share in its benefits. None can afford to stay out. The more that join and take an active part in the work, the greater will be the results and the greater will be the benefits to those now members, so each should work to secure others to join. That some are at work is evidenced by the fact that new members are daily being added to the list.

### NO STATE ELEVATORS IN NEW YORK.

The bill to establish state elevators has been definitely killed in the New York Legislature. The bill as brought before the canal committee provided for two transfer elevators at Buffalo and four at New York, under the control of the state, which should transfer grain at the rate established by law and thus induce competition in the business. It was simply a continuation of the fight inaugurated by the canal men against the elevator pools at Buffalo and New York, by the passage of the McEvoy law, whose constitutionality has just been passed upon by the supreme court of the United States. The bill providing for state elevators was intended to enforce respect for the state law fixing rates by providing the best of all incentives for men to act right in business competition. Of course, state interference in private business is always to be deplored, but in the present case the provocation was strong. Perhaps it is just as well that the elevator bill was killed, now that the highest court has passed upon the constitutionality of

the law fixing charges. But it remains to be seen whether the elevator men at Buffalo and New York will submit. If not, a state elevator bill will probably come up every session of the legislature until they do.

### KANSAS CITY INSPECTION.

The efforts of the Missouri Warehouse Commissioners to oust the grain inspectors of the Commercial Exchange bids fair to end in dismal failure. As is well known, grain dealers suffered many losses at the hands of inefficient inspectors at Kansas City and prominent members of the trade frequently sent petitions for better service to the Commission, but in vain. Finally inspection rules were established by the Commercial Exchange, new inspectors were appointed, and the state inspectors ignored as they deserved to be.

The members of the Exchange claim, and rightly too, that the state inspectors have no legal authority to inspect grain at that point. Most warehouse laws declare public warehouses to be, warehouses in which the grain of different owners is stored for a compensation, but the Missouri law provides that, "all warehouses, elevators and granaries of 50,000 bushels capacity and over, in which grain is stored in bulk and in which the grain of different owners is mixed together, shall be considered public warehouses." The law also provides that, "receipts of grain by public warehouses in all cases shall be inspected and graded by a duly authorized inspector and shall be stored with grain of a similar grade."

To evade the obnoxious regulations of the law and to secure relief from the unreliable grading of the state officials the Kansas City elevator men refrained from mixing the grain of different owners. As they store the grain of each owner in a bin by itself they are not public warehousemen according to the law, and the inspectors can not inspect their receipts or shipments.

Such is the law, so the Commercial Exchange will have charge of the inspection until the next legislature meets, and maybe longer.

### THE FARMER'S COMPLAINT IS NOT JUSTIFIED.

In a five-column editorial the *Pioneer Press* recently tried to show that the farmer's complaint that the price of wheat at the elevator nearest the farm is far less than the price of it in the principal markets of the world, less the cost of transportation from the field to the point of final sale, was justified by the facts, and it gave some of the items of expense connected with the transportation of wheat from the farmer's wagon to the agent in Liverpool. Part of the article is published elsewhere in this issue.

The *Pioneer Press* gives the average price of wheat by months for the last quarter of each of the last three years at different markets in this country and at Liverpool, where it erroneously assumes prices are made for this country. It claims prices given are official. They are not. The Chicago Board of Trade has neither compiled nor sent to any one market quotations for several years. The prices obtainable in the Liverpool market are often very different from the prices reported as ruling by British publications devoted to markets, and this difference has been frequently commented upon by American market reporters. Sales are not made openly in the Liverpool markets and few reporters would agree as to the grade of the grain sold, so it is a very difficult matter to tell what any lot of American wheat will sell for until it is exhibited on that market and bids asked for. If it is sold then will the selling price of that certain lot of wheat on the Liverpool market be established, but of no other. Frequently the officially quoted prices of wheat in English markets are too low to permit of exports from this country, yet wheat is exported.

After looking upon these unreliable figures through goggles turned green with prejudice the editor says: "It seems reasonably clear that from 8 to 10 cents per bushel is lost in transfer," yet



he allows not one cent for storage, cleaning, shrinkage, dockage, leakage, interest on capital, or time and expenses of dealers. At most every terminal market the grain is stored for at least 10 days. At Minneapolis the first storage period is 20 days and the cost of same  $1\frac{1}{4}$  cents per bushel. At Duluth about the same rate prevails. At New York and Buffalo, the elevator pool to evade a law receives no grain for transfer and charges  $\frac{7}{8}$  of a cent per bushel on all grain that does not remain in its houses more than ten days. The cost of cleaning ranges from  $\frac{1}{2}$  cent to a cent per bushel. Shrinkage varies with the grain. At every storage elevator grain is docked for future shrinkage upon receipt and little wheat gets into ocean vessels without being docked at least three times. The actual shrinkage in transit and the leakage must also be taken into consideration. Capital must be given ample compensation or none will be employed in the risky business of marketing grain. The dealers must be paid for their time and trouble or they will not do the work. Their office rent, clerk hire and other expenses connected with their business must also be paid. In estimating the actual expenses for October shipments the *Pioneer Press* finds the freight rate from Duluth to Buffalo, plus the rate to Buffalo to New York to be  $7\frac{1}{2}$  to 8 cents per bushel and the difference between the Duluth and New York prices to be less than  $13\frac{3}{4}$ , yet it erroneously states that, after the freight is paid nearly as much more is left for insurance, terminal charges and transfers. Its own figures show that less than 6 cents is left to pay these charges. Half of this amount will be absorbed by the charges named. The remainder will not be sufficient to cover storage at Duluth and New York, commissions, interest on capital and loss of grain. In comparing the difference between the New York and Liverpool prices with the cost of transportation the *Press* makes the same exaggeration and this too, in defiance of its own figures, which plainly shows that it has an ax to grind rather than a truth to prove.

In December the conditions had changed and the reliable figures compiled showed that grain was being exported at a loss to dealers, so the *Press* neither tried to justify the complaint of the farmer against December prices, nor to show how it was possible for the dealer to do business that way. It says "The New York price was 15 cents per bushel higher than the Minneapolis average, which would fairly meet the cost of all-rail transportation." The actual cost of transportation last December was over 20 cents. It says the elevator charges at Duluth are from  $\frac{1}{4}$  to  $\frac{1}{2}$  cent per bushel. The charge for transferring is  $\frac{3}{4}$  of a cent and little grain passes through that market without paying from  $1\frac{1}{4}$  to 2 cents per bushel.

This near-sighted expositor says the freight rates are "remarkably stable," yet its own figures and facts show that the contrary is true. We agree with the *Press* in the statement that none of the facts contained in its investigation account for the apparent difference in prices. It was not looking for such facts, it started out to justify the farmer's complaint and did so to its own satisfaction but had to ignore necessary expenses of the trade.

In conclusion the *Press* says: "There is no assignable reason why the price in the great centers of the grain trade in the United States should not vary substantially as the price in Liverpool. It is admitted everywhere that the foreign demand fixes the world's price, and that this process takes place in Liverpool." Our prices do vary substantially as prices in other countries but our home supply and demand has more to do with making our prices than the Liverpool market, as has been shown repeatedly in our columns. The grade taken for the comparison is but a small per cent of the wheat exported to England. Different conditions and circumstances surround each shipment, so no shipment can be taken as a criterion for others. The *Press* ignores the fact that the bulk of the export wheat is stored at several points before it leaves the country; very little of it is shipped direct. Real and theoretical shipments are quite different as our contemporary will learn to its sorrow if it will ship a cargo with

the expectation of making a profit of 10 cents per bushel. Were exporters making that profit our exports would be doubled, all dealers would take part in this branch of the trade, none would leave it, none would fail, all would be wealthy.

If each of the many dealers, commission men, and agents engaged in moving wheat, from the producer to the foreign consumer were working for their health they might be expected to work for nothing, but as it is they are after a living they take a profit when they can get it, which is not always and frequently is very small. Competition in the grain business is as great as elsewhere and the dealer has far more to complain of than the farmer.

### WATERWAYS AND FREIGHT RATES.

The effect of water transportation upon grain rates is seen in the recent reduction in the rate on sixth class freight. No sooner did the all-rail lines commence to feel the competition of the lake lines than reduced rates were proposed. At first a reduction of  $2\frac{1}{2}$  cents per 100 pounds in the rate on grain was proposed, but the tonnage decreased so rapidly that a reduction of twice this amount was thought necessary, and May 9 the rate on freight of the sixth class was reduced to 20 cents per 100 pounds Chicago to New York.

This action had scarcely been determined upon when the managers of some of the lines realized that there was no reason for reducing the rate on articles other than grain and its products, and strongly urged that the rates on all articles in the sixth class, except grain and its products, be put back again to the basis of 25 cents per 100 pounds Chicago to New York. The managers of several roads are heartily in favor of it, so the change will be made.

The competition of the lake carriers is greater in the grain carrying trade than in any other east-bound freight and this is the cause of the reduced rate. As soon as the lakes are closed to navigation the rate will be advanced to 25 cents.

From this it is clear that our export trade in grain and grain products is benefited more by water transportation than any other commodity. For this very good reason grain producers and handlers should guard carefully the interests of our inland waterways.

### THE CHICAGO QUOTATIONS.

The Chicago Board of Trade has decided by a good majority to once more make its quotations public. How this shall be done is still unsettled, but that is simply a matter of detail that will be settled later. The main point is that the quotations are again to be sent out, and under former rulings of the courts, the Board will not be able to discriminate as to the parties to whom they may be sent. There has always been more or less dissatisfaction felt as to the policy of discontinuing quotations to injure the bucket shops. Before the vote was taken, which settled the fact that quotations were to be resumed, the following was circulated as a sample of "Chicago Board of Trade Blue Laws in 1892:"

Thou shalt not inform thy neighbor of the continuous price of cereals lest thereby he may obtain sufficient knowledge to do business.

Thou shalt not send out continuous quotations lest thy great enemy, the bucket-shop man, may get on to "thy little scheme."

Thou shalt not send out quotations through the Western Union or other telegraph companies lest they may disseminate the same throughout the large cities and people may become aware that there is such a place as Chicago and that it contains a Board of Trade.

Thou shalt do everything to kill thy great enemy, the bucket-shop man, even at the risk of killing thyself.

Thou shalt pattern thyself after the great enlightened and civilized Chinese nation and build a wall around thyself that the world may not know of thy doings, and thou mayest enjoy happiness and felicity of being the only human who knows the price of cereals and food products generally.

Thou shalt have no intercourse with the outer world, only every fifteen minutes by private wire.

It certainly must be confessed that the Board has hurt itself quite as much or more than it has

the bucket shops by the policy pursued the past three years; and the sooner a losing policy is reversed the better it is for all concerned.

### EXCESSIVE FREIGHT RATES.

A number of prominent packers of the country have brought suit against the Eastern trunk lines for overcharges amounting to several millions of dollars. The suits are brought under the old common law principle that common carriers cannot charge exorbitant or excessive rates for the transfer of freight. Prior to April 1, 1887, when the Interstate Commerce Law went into effect, the rate on dressed meats from Chicago to the seaboard was 45 cents per 100 pounds. After the law went into effect the Eastern trunk lines, by common consent, advanced the rate from 45 to 65 cents per hundred for the same class of freight. After about one year they got to fighting among themselves, and the rate was lowered to even less than it had been before the Interstate Commerce Law went into effect.

The packers hold that a common carrier cannot make rates by mere caprice, but must establish just and uniform rates and that the patrons can recover the amounts charged in excess of what a court would decide as a just and reasonable rate of charges.

If the cases are won other shippers will undoubtedly bring similar suits and the result in the end will be that rail freight rates will be more stable and will not be changed every time a traffic manager takes the notion. Shippers frequently suffer loss by an advance in freight rates as well as by a reduction, and steady rates would be far more satisfactory to all.

### CHICAGO AND LIVERPOOL PRICES.

Two contradictory statements are commonly heard on every hand, in regard to the price-making factor of wheat. Nothing is commoner than the statement that Liverpool dictates prices; and nevertheless there are plenty of people who believe that Chicago fixes the price of wheat. The minority report of the committee that inquired into the alleged "combine" in Minnesota, stated that the evidence showed that Minneapolis and Duluth ought to have three times the influence in the making of prices as Chicago and Milwaukee. How supply comes to dictate price, the minority report states not; the fact that such a remarkable statement is made at all, shows the confusion that exists as to what actually makes wheat prices.

We may be very certain that if either Liverpool or Chicago made prices, the anomalies of trade so frequently chronicled would not occur. For instance, if Liverpool actually dictated in the matter, prices would not so often be too high in Chicago to admit of profitable export trade. Nor, if Chicago, on the other hand were the price maker, would prices be so low in Liverpool that the Chicago man could not sell there. While foreign demand helps to fix the price on export stuff, it is a mistake to assert that Liverpool, or the foreign demand, fixes our home price on all our stuff. Prices at Chicago and Liverpool on long and short crops could be quoted by the column to show that both the common statements as to the making of the price of wheat, are erroneous. It is not foreign demand, but demand, home and foreign, that makes prices. Chicago and Liverpool are only indicating dials.

THROUGH the efforts of the Nebraska State Board of Transportation one line has been induced to grant milling-in-transit rates. Hereafter grain consigned to an elevator on the line of the Missouri Pacific between the station shipping and that of final destination will be entitled to a lower rate than the sum of the two local rates if shipped from the intermediate elevator within six months after receipt.



## Grain Dealers' Associations.

### STATE GRAIN DEALERS' ASSOCIATION OF TEXAS.

*President*, S. F. McENNIS, Dallas; *Vice-President*, E. EARLY, Waco; *Treasurer*, J. P. HARRISON, Sherman; *Secretary*, G. D. HARRISON, McKinney. *Directors*, J. F. McENNIS, J. P. HARRISON, E. EARLY, S. E. McASHAN of Houston and C. F. GRIBBLE of Sherman.

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*Legislative Committee*, J. W. McCORD, D. McALLISTER, E. W. SEEDS, E. C. WAGNER, W. A. HARDESTY, and E. C. BEACH.

## EDITORIAL MENTION

THE dryers and oat clippers at Chicago have been kept busy of late, and the quantity of clipped oats shipped out has been unusually large.

IN 1872 the cost per bushel of wheat from Chicago to New York by lake and canal was 19 cents; by lake and rail 27 cents; by all rail 33 cents. These charges are now about 7, 9, and 15 cents respectively.

THE grain cargoes of the Chicago winter fleet fell short of their bills of lading when they arrived at Buffalo and vessel owners had to pay nearly \$20,000 to make good the deficiency. The matter is being investigated.

WE are pleased to learn that Mr. W. S. McCloy is now identified with the Charter Gas Engine Co. of Sterling, Ill., as Secretary. Mr. McCloy has been prominently connected with the Eureka Manufacturing Co. of Rock Falls, Ill., one of the veteran manufacturing institutions of the West. He is a young man of energy and ability, and

has been a stockholder in the Charter company for some time; so his new function is not his first introduction to the business of the company.

THE York Foundry & Engine Co. of York, Neb., which makes a specialty of grain handling and cleaning machinery, has issued a new catalogue of elevator supplies and will be pleased to mail copy to anyone desiring it.

INSURANCE on growing grain is almost wholly unknown in the East but is common on the Pacific coast. The business is profitable only in localities where irrigation is resorted to, as it is said the moral hazard would be too great in times of drouth, in the Eastern states.

WE are indebted to the Cincinnati *Price Current* for a copy of its Statistical Annual for 1892. It is a reliable compilation of provision and grain trade statistics, live stock and beef exhibits and a variety of other commercial statistics that will be found very useful to any one connected with the trade.

CHARLES J. MURPHY is still in Europe working in the interests of our export corn trade and will remain there for some time to encourage and teach Europeans how to prepare corn for human food. Our economical Congress has decided to appropriate just \$2,000 for the continuation of this work.

HAVE you heard from that car of grain you shipped last November or December? If not just sit down and tell us how well pleased you are with the grain shipping facilities of our carriers. Readers of the AMERICAN ELEVATOR AND GRAIN TRADE always read with interest the opinions of other dealers.

GRAIN insurance rates are lower in Chicago than elsewhere. The minimum rate in Chicago is \$1.25, with 10 per cent. off for short insurance, while outside it brings 2 per cent., and all or nearly all elevators of the Northwest, especially at Duluth and West Superior, are sprinkled. Those in Chicago are not.

It is rumored that the Webster Manufacturing Co. of this city has taken one of the largest contracts ever awarded a manufacturing firm in the United States. The order is said to be for \$15,000,000 of type-setting machines, to be turned out in the next three years. This is no slight compliment to this sterling company.

ELEVATOR men will be interested in the advertisement on another page of the Fidelity Anti-Choke Elevator Alarm Manufacturing Co., of Duluth, Minn. The purpose of their device is sufficiently indicated by its name. It is simple, and a saver from each point of view. They will be pleased to give full particulars of their important device to any who apply.

THE Barnard & Leas Manufacturing Company of Moline, Ill., has just issued its annual price list of mill and elevator supplies, a copy of which should be in the hands of every elevator man. It claims to have the most complete line of grain cleaning machinery of any house in the world, and has devoted much space to the description of these machines in its new catalogue.

THE situation as regards the corn crop is serious in Illinois and other states. In Illinois it has been many years since so small an acreage of corn was planted at this time of the year and the temperature has continued low and the soil cold. But there is no need of any fear of failure as yet. It has been demonstrated again and again that if planting can be completed in the central part of the state by May 25, or even later, no anxiety need be felt so far as the date of the planting is concerned. Late maturing

varieties of corn should be avoided, however. The weather has been extremely unfavorable so far, but matters are not desperate, as some alarmists would have us believe.

If you want to sell or buy an elevator, an elevator site or elevator machinery, want a partner or help, advertise in the only journal devoted exclusively to the interests of the elevator men and grain dealers and you will receive the best results.

A COMPANY has been organized at West Superior, Wis., to build cylindrical cars, patterned after the whaleback boats. When grain is shipped in steel cars the amount stolen in transit and at terminals will be materially reduced, none will be spilled along the route or damaged by leaky roofs.

BEING thoroughly alive to the needs of the grain trade, the Commercial Exchange of Philadelphia has adopted inspection rules for the grading of spring wheat, which are published elsewhere in this issue. Duluth wheat will be kept separate and its identity preserved, and nothing will be left undone to encourage the marketing of spring wheat at Philadelphia.

GRAIN shippers complained so persistently of shortages and the Wabash Railway Company found so many of its cars loaded with grain broken open while side-tracked at Englewood, Ill., that watchmen were finally stationed about the yard and the first night four men were arrested. When shortages occur shippers should not hesitate to complain to the carrier; it may take steps to remedy the evil.

THE schedule of grain freight rates from Pennsylvania points to Philadelphia has been changed by the Pennsylvania Railroad Company so as to place Philadelphia on an equality with Baltimore. The new rate is three cents less than the rate to New York instead of two cents as heretofore. With lower local rates, through grain trains, new ocean steamship lines, new grades and renewed energy Philadelphia ought to secure a good share of the export grain trade.

FOLLOWING in the path of other sheets that have for a short time eked out a scanty existence by magnifying the farmers' real and imaginary wrongs, *Great West*, the demagogues' organ of St. Paul, has been trying to convince its readers that dealers make a profit of 30 to 40 cents per bushel on wheat exported to Liverpool. That man who is such a consummate fool as to continue to publish an agitators' sheet when he can make 40 cents on every bushel of wheat he will export to Liverpool deserves naught but pity and sympathy from members of the grain trade.

JERRY SIMPSON, the sockless solon of the sunflower state, succeeds in continuing to attract attention to himself. His last break is that he intends to vote against Farmer Hatch's Anti-Option Bill. Jerry has been counted as a supporter of the Hatch Bill as a matter of course. But he says he is opposed to the whole scheme and does not believe it would benefit the farmer. In fact Jerry believes in the sub-treasury scheme as the sole panacea for the farmers' ills. His defection has caused something of a sensation although Farmer Hatch denies that it amounts to anything.

A BILL has been reported by the House committee on commerce providing for the amendment of the Interstate Commerce Law, so as to secure greater expedition in bringing cases to an issue in the courts and the removal of penalties to shippers who are parties to violations of the Interstate Commerce Law. Without such an amendment the law can be enforced in but few cases. That it should be enforced is agreed to by all shippers, yet few are using their influence with their representatives in Congress to secure the necessary amendment. Shippers do not en-



joy being discriminated against by carriers, but they do seem to enjoy a lethargy that forbids their waging war upon such discrimination.

THE New York state railroads engaged in carrying grain from Buffalo to New York, have made another attack on the grain rate regulator—the Erie Canal—and a bill has been passed to the third reading in the state Legislature which provides that the city of Albany shall fill up the canal basin at the eastern terminus of the Erie Canal. If this is done the canal will be crippled and its efficiency reduced. The railroad companies are determined to kill the canal. When they have accomplished their purpose rates will be advanced and the export trade will be driven away from Buffalo.

SEVERAL years ago a grain dealer in the Northwest advocated in the columns of the AMERICAN ELEVATOR AND GRAIN TRADE the erection of a special bin elevator and it is now reported that a special bin elevator of large storage capacity will be erected at the head of Lake Superior. The object is to keep the grain of different shippers separate and preserve its identity so that, when a dealer sells grain that is up to the top notch of a grade he will not deliver skin grade stuff, but his own grain of superior quality. Neither will receipts be docked for future shrinkage.

ENCOURAGED by the remarkable increase in Philadelphia's grain trade, the grain merchants of that city have been making strenuous efforts to attract grain to that city. Much is now being sent to that city by way of the great lakes and the city of Erie and recently a delegation visited Buffalo for the purpose of convincing merchants of that city that Philadelphia had ample facilities for handling a large export trade. The heavy charges at Buffalo and New York are becoming onerous and the grain trade will naturally gravitate away from these points to that channel where the friction is the least.

GRAIN dealers will do well to send representatives to Washington the last of this month to assist in procuring a uniform bill of lading. On the last day of the month the House committee on Interstate and Foreign Commerce will grant a hearing on bills now before it, providing for uniform bills of lading for carriers engaged in interstate commerce. The carriers will have representatives present to look after their interests and if possible will prevent any legislative interference. The present bill of lading by which they are not bound to do anything is very satisfactory to them, and of course they would greatly prefer to have its use continued.

THE Secretary of the Northwestern Farmers' Protective Association claims to have made arrangements with the Great Northern and the Northern Pacific Railway companies whereby the association will lease a number of elevators and build new ones along these lines in North Dakota. When the association gets enough wheat to make a cargo it should ship it to Liverpool and get the 10 cents per bushel the *Pioneer Press* says they do not, but ought to receive. A little experience will give permanent relief to the kickers. The farmer will never appreciate how much the grain dealer does for him and never believe he receives so little pay until in company with other farmers he tries to get along without the dealer.

THE superintendent of census has issued the following statistics of cereal production in Kansas, for the census year ending May 31, 1890, compiled under the supervision of Special Agent J. Hyde, in charge of agriculture: Corn 7,314,765 acres, 259,574,568 bushels; wheat 1,582,635 acres, 30,399,871 bushels; oats 1,463,526 acres, 44,629,034 bushels; rye 199,146 acres, 2,917,386 bushels; barley 7,201 acres, 165,715 bushels;

buckwheat 6,907 acres, 67,115 bushels. The total area devoted to cereals was 10,574,180 acres as compared with 5,776,150 acres at the tenth census. The increase in the acreage in corn was 3,896,948 acres. The average yield per acre in bushels was as follows: Corn 35.49, oats 30.49, barley 23.01, wheat 19.21, rye 14.65, and buckwheat 9.72.

A TRUNK line has recently made the experiment of running a train of large cars loaded with grain from Chicago through to the seaboard without change of engines and without switching. The trip was made in less than four days, and the experiment is considered a success. When grain is regularly transported to the seaboard at the rapid rate of over 10 miles an hour the grain dealers of the country will have cause to hold a mass meeting to return thanks to the managers of the enterprising line. The same road which made this experiment now proposes to build cars with a capacity for 80,000 pounds for through freight. The consummation of its plans will prove of invaluable benefit to grain shippers, for other roads will be compelled to do likewise or give up the grain carrying trade to the most progressive.

ONE of the commonest arguments in favor of the sub treasury scheme, and one that has appealed very strongly to people of pronounced temperance views, is that the government builds storehouses for whiskey. Of course, if the government builds storehouses for whiskey there should be no objection to government warehouses for grain and other agricultural products, is the argument of these people. While one wrong never justifies another, the argument has been a telling one with many people. Now the simple fact is that the government does not now and never has built the warehouses for the storage of liquors, from the public funds. The warehouses have always been built at the expense of the distillers, and when built are taken possession of by the government. So the parallel between the whiskey storehouses and the proposed government pawnshops, fails.

### SPECULATION AND INVESTMENT.

The promoters of the legislation aimed at in the several bills now before Congress, says the *Market Record* of Minneapolis, profess to think prices would rise 25 cents as a result of favorable action on them, and the opposers profess to think that prices would fall 25 per cent. There is no doubt that all of that kind of talk is purely to create prejudice against the legislation or for it. The fair way to look at it would be to say that speculations in farm products have very little effect on general prices, excepting to enlarge the field of buyers that would more easily absorb large quantities of grain that would be moved shortly after harvest, or before winter. Speculators as they run, on the Exchanges, do not care whether wheat rises or falls, if they are only on the right side. It is the same with the other commodities covered by these bills.

Without speculation in futures of these commodities, the surplus would have to be taken care of by another class of buyers known in the market as investors. That is, they are capitalists who buy because the property sells below its value and think it will pay them to hold it as an investment until the time when it will be wanted for consumption. They are tempted to purchase only on account of cheapness and the strong probability of a rise that will pay them handsomely for the risk they assume.

Such people would not load up with high priced wheat. They would study the situation and buy only when the property would be for sale below its legitimate value, the value being based on the ordinary calculation of supply and demand. The modern speculator, as we find him, buys because he thinks some temporary matter will force the price up in the near future, or because he has been compelled to, perhaps by getting on the wrong side. In a general way he thinks little of the laws of supply and demand, for he does not expect to hold on to anything long enough for them to affect his current operations. He knows if he buys wrong he can sell out at any moment and his risk is little. The smooth capitalist

buying to keep for a larger rise, and for the fat dividends, moves with greater caution, and with smaller competition, works to beat prices below legitimate values, and does what large investors always do, tries to get in at the bottom.

The character of the two classes of operators outlined, of itself, with the motives that move them, tells plainly under whose guardianship prices would suffer most. After all, both would be subject to the laws of supply and demand in a general way, the only difference being that the investment buyer, relieved of the speculator who buys for a quick turn, or sells for the same, so manages as to get more off from the legitimate value of the property before he takes it. Then the modern way of selling against purchase saves a little also. It is thought to be a safe calculation that prices average a few cents higher under the present mode of handling farm products than under the old method, advocated by the movers in the legislation. A proof of it is found in the fact that under the investment way as advocated by Washburn and others, prices ranged some 10 to 15 cents lower when farmers sold in the fall to investors than when investors sold in the spring and summer to consumers and exporters. Under the modern method of futures the price has averaged only about 5 to 6 cents lower in the fall when farmers sold to speculators than when speculators sold to consumers and exporters.

### NEW GRADES FOR SPRING WHEAT AT PHILADELPHIA.

At a meeting of the grain trade held at the Commercial Exchange, Philadelphia, May 11, the following grades of spring wheat were adopted on the recommendation of the grain committee, viz.: No. 1 Hard, No. 1 Northern, No. 2 Northern, No. 3 Spring, and Rejected Spring, with the understanding that Duluth wheat shall be kept separate and its identity preserved.

The requirements of the new grades are as follows:

No. 1 Hard Spring Wheat.—No. 1 Hard Spring Wheat must be sound, bright and well cleaned and must be composed mostly of Hard Scotch Fife and weigh not less than 58 pounds to the measured bushel.

No. 1 Northern Spring Wheat.—No. 1 Northern Spring Wheat must be sound and well cleaned and must be composed of hard and soft varieties of spring wheat.

NOTE.—It is to be understood that the minimum test weight of this grade shall be not less than 57 lbs. to the measured bushel and must contain not less than about 50 per cent. of the hard varieties of spring wheat.

No. 2 Northern Spring Wheat.—No. 2 Northern Spring Wheat must be sound, reasonably clean and of good milling quality.

NOTE.—This grade to include all wheat not suitable for the higher grades and to weigh not less than 56 lbs. to the measured bushel.

No. 3 Spring Wheat.—No. 3 Spring Wheat shall comprise all inferior, shrunken or dirty spring wheat weighing not less than 54 lbs. to the measured bushel.

Rejected Spring Wheat.—Rejected Spring Wheat shall include all spring wheat that is grown, badly bleached, or for any cause unfit for No. 3 wheat.

NOTE.—Wheat containing admixture of "Rice" or "Goose" wheat will in no case be graded higher than rejected.

### GOVERNMENT CROP REPORTS.

A resolution has been adopted by the United States Senate directing the Committee on Agriculture and Forestry to ascertain and report the present "condition of agriculture in the United States, and why the present prices are depressed; then the cause of such depression and the remedies therefor; and particularly whether the reports of the Department of Agriculture on the distribution and consumption of farm products published from time to time by authority of the Secretary of Agriculture, contribute in any way to such depression of the market prices of such products, and whether any proper governmental purpose is subserved by such publication, and whether such publication should be continued, and for this purpose that they be authorized by sub-committee or otherwise to sit during the recess and sessions of the Senate, at such times and places as they may deem advisable, to employ a stenographer and such clerical assistance and such experts as they may deem necessary, and that they be authorized to send for persons and papers."



## CROP : CONDITIONS.

IOWA, May 9.—The weekly crop bulletin, which the Iowa weather bureau issues shows no improvement in the crop condition of the state. The rains during the past week have absolutely prevented all farm work. The farmers are still very gloomy at the outlook.

ONTARIO—Au Ontario Agricultural Department bulletin says its "correspondents are unanimous in reporting the past winter to have been exceedingly favorable to the farmer." In most places there was a fair amount of snow, which covered the ground uniformly, and which remained until spring.

CALIFORNIA, LOS ANGELES, April 30.—The rather scant amount of rainfall for this season will have its effects on the grain crops of this section. The rainy season is past and the total precipitation is only from eight to twelve inches according to locality. Rain may fall within the next month, but unless it comes soon it will do more harm than good. Should it fall at once, it would not be an unmixed benefit. Much of the early grain would be knocked down.

MISSISSIPPI, May 5.—Now that cotton and corn, so far as the uplands are concerned, are planted and the acreage determined, opinions as to the acreage in each crop are of some value when backed by observation. A well-posted hill planter said yesterday that the cotton acreage in his neighborhood, parts of the Third and Fourth Districts of this county, was reduced fully 30 per cent., corn increased 20 per cent. and a much larger area than usual planted in minor food crops, forage, etc.—*Vicksburg Herald*.

MICHIGAN, May 9.—The weekly Michigan crop report shows a daily mean temperature throughout the state for the week of 3.5 degrees above the normal. While heavy rains have fallen generally in all sections of the state, the effect has been to improve the condition of grasses, wheat and oats on sandy soil. Plowing for corn and other small grains had to be suspended, and all outdoor farm work remains at a standstill. In some localities in the central and southern counties the lowlands are under water and warm sunshine is needed to dry out the ground.

MINNESOTA, May 9.—The Minnesota weather crop bulletin gives the conditions in this state as follows for the past week: In the northwestern counties seedling progressed slowly, being delayed by rains of the week. In some localities not more than half the seedling is done, while from other points it is said to be nearly finished. In the central counties, where the seedling was about finished a week ago, little progress has been made in growth, being retarded by the cold, wet weather, but with sunshine and warmth the outlook is good. The rains are said to have been beneficial. The southern counties report wheat generally making a good growth, but slow, owing to the unusually low temperature prevailing.

KANSAS, May 9.—The Kansas state crop report for the past week says: The conditions are encouraging notwithstanding the fact that the weather has been unfavorable to the prosecution of farm work and the development of plant life. The soil, says the report, is in excellent condition for rapid growth when warm weather comes. The cold, rainy weather has greatly delayed planting and will cause a late crop. The condition of winter wheat has improved from 85 to 88 per cent. The acres sown in spring wheat have increased 30 per cent. with a total acreage of 197,496 acres. The condition of the crop is 92 per cent. The acreage sown to oats is the same as last year, with condition good. Corn planting has been delayed so that only about 45 per cent of the crop has been put in.

OHIO, May 9.—The State Board of Agriculture's May bulletin is disappointing from the fact that it does not bring the condition of wheat as high as was expected. The crop on April 1 was estimated at 69 per cent., the May estimate is 73, but a much higher percentage was expected. This verified the report of last month that much of the wheat has been winter-killed and it shows that considerable was beyond recovery even with favorable weather. Other crops are estimated as follows: Barley, condition compared with full average, 77 per cent. Rye, condition compared with full average, 80 per cent. Oats, acreage, compared with full average, 87 per cent.; condition compared with full average, 79 per cent. Clover, average date of sowing March 27, acreage, compared with full average, 83 per cent.

WISCONSIN.—The Wisconsin weather service, in cooperation with the United States Department of Agriculture, has issued the following crop bulletin for the week ending May 7. The rainfall for the past seven days has been excessive. On bottomland some oats, grass and wheat have been washed out; but on the whole the vitality stored in the ground by these soaking rains renders the slight damage from flood of comparatively little account. If warm weather comes soon—before the spring seed rots—a rapid growth of everything will result. With this storage of moisture the hay crop seems to be assured, although the cold has prevented early growth, and there will not be much pasturage for some days yet; some farmers are still feeding hay. Nothing has been done in the way of planting corn, and the ground will probably not be in condition to work for several days. All correspondents continue to rate winter

wheat very low. While rye has suffered it is in much better condition than wheat.

NORTH DAKOTA.—A summary of the seeding situation in North Dakota shows the condition as affecting wheat to be more favorable than scattering reports have indicated. It is conceded that under the most favorable conditions the wheat acreage will be materially curtailed, some estimate as much as one fourth. This will not be a misfortune so far as the farmers are concerned, however, for two profitable crops, oats and barley, will take the place of wheat. There will be a big increase in wheat acreage resulting from the new immigration in the northern counties of North Dakota. There is still a great deal of threshing to do from Church's Ferry north, but on account of the scarcity of threshing machines and men but little will be done until seeding is over. Many farmers claim that by June 10 crops will be as far advanced as usual, as the ground is so moist the wheat will grow rapidly and strong.

EASTERN WASHINGTON, May 5.—In portions of Spokane and Lincoln counties seeding was generally delayed by the wet weather. In Douglas and Kittitas counties seedling is well along in all portions of the north; while the grain is growing slowly, it looks well, is of good stand and color. Near Peone, Spokane county, most of the fall grain had to be resown with the spring grain. In Adams county the outlook for grain is good, the weather has been very favorable and rapid growth is reported. In Whitman county every effort is being made to increase the acreage of grain; reported increase of acreage near Farmington, one-fifth; Palouse, one-third; Silver Creek, one third. Near the mountains the ground still remains too wet for working; near Colfax seeding is completed; near Palouse two-thirds plowed and one-half seeded; near Farmington one-half plowed and one-half seeded. Many farmers have turned their stock on the county roads and are cultivating their entire farms.

SOUTH DAKOTA, May 9.—The following bulletin is issued from the South Dakota weather crop bureau: The weather during the week has been cool and cloudy. Both the temperature and the amount of sunshine have been considerably below the average. Over the southern portion of the state there has been more rain than elsewhere. Warmer weather and sunshine are very much needed for all seeded crops and to permit the planting of corn. Over a great deal of the state the ground is too wet to plow for corn, but farmers are taking advantage of this condition to break sod, which will be sown to flax. Comparatively little seeding was done during the week, but the wheat was nearly all sown, and oats seedling progressing. The condition of growing crops and grass is good, but would be much better with a few bright and warm days. Very little corn is planted because of the wet and cool condition of the ground. From all parts of the state wheat is reported "stooling" finely and of excellent color.

WESTERN WASHINGTON, May 5.—The latter part of the week has been showery with warm days and cool nights, though in the last few days the nights have been much warmer than in the forepart of the week. While in the counties of Whatcom, San Juan, Skagit, Snohomish and Island the weather has been too cold and wet for rapid growth, still it has been much better than for several weeks back, especially in Island county and the islands of Skagit. In Snohomish county most of the tide and has dried out and is in condition to work; the fresh marshes are still too soft. On the tide and fresh marsh lands oats will be the principal, almost the only crop. In Jefferson and Clallam counties there is still too much rain and all vegetation is seriously delayed. In Lewis, Chehalis and Cowlitz counties the weather has on the whole been favorable, and all grains and other hardy crops are growing well. The rain has prevented the completion of seeding and in portions of Cowlitz and Lewis counties the grain is not half sown.

ILLINOIS.—Under date of May 1 the Illinois State Board of Agriculture issues the following crop bulletin: The reports received at the office of the Illinois State Board of Agriculture this date indicate a rather discouraging outlook for the farmers of the state. The cold, wet spring has delayed farm work of all kinds, and much less plowing has been done at this date than in ordinary years. The central division of the state has suffered more than either of the others in every respect, the precipitation in that section having been much larger. Little or no corn has been put in, as it was too wet to plow, and the oats are also seriously diminished. The area of oats in Northern Illinois is 1 per cent. larger than a year ago, and the May 1 condition is 87 per cent. In Central Illinois there is a decrease in the area of oats as compared with 1891 of 25 per cent. and the condition of the crop is even more discouraging, being but 73 per cent. of an average. In many localities where oats were planted the heavy rains washed them out, so that there will be very little oats harvested in this division this season. In the southern division the area as compared with 1891 is but 90 per cent. and the condition is 20 per cent. below a seasonable average. Taking the entire state into consideration the oats area for 1892 is 88 per cent. of that of 1891, and the May 1 condition is encouraging for but 80 per cent. of an average yield per acre. Winter wheat is more promising than was anticipated earlier in the season, when it was thought to be badly winter-killed. It is now thought that of the 9 per cent. reported as winter-killed or destroyed by floods or Hessian fly much the larger part of the injury is due to the floods. The average condition of winter wheat at this date is 90 per cent. Although considerably below the 1891 average, this is a very fair con-

dition, and with a favorable season from now until harvest no fears need be entertained of wheat famine in Illinois. There remain in the producers' hands at this date 17 per cent. of the wheat crop, or 5,895,541 bushels, the largest surplus on hand May 1 since 1884. Both area and condition of spring wheat are about 90 per cent. Of the 1891 corn crop of 217,982,050 bushels about 30 per cent., or 65,394,615 bushels, remain in first hands May 1.

GOVERNMENT CROP REPORT.—The statistical returns of the Department of Agriculture for May indicate an average condition of 84 for wheat, against 81.2 last month. The weather has been too cold for rapid growth, yet the crop has improved perceptibly. The change in the central wheat region is from 71 to 75 in Ohio, 83 to 84 in Michigan, 78 to 85 in Indiana, 82 to 86 in Illinois, 72 to 74 in Missouri, and 77 to 80 in Kansas. In Michigan April weather was quite severe, causing considerable "heaving" in clay soils that nearly offset the improvement in other areas. Low temperature prevented much improvement in Missouri. The condition has slightly declined in California, yet the prospect is still good on the Pacific coast. The condition of rye has advanced from 87 to 88.9. Winter barley averages 92.8. The percentage of New York is 92, California 94, Illinois 90, Michigan 88. Mowing lands have suffered some loss of condition from winter freezing, but make a higher average than the winter grains, or 89.6 for the entire breadth. The condition of pastures average, 87.5. The proportion of spring plowing usually done on the first of May is a little above three-fourths for the whole country, or 76.6 per cent. as reported. The present season has been cold and unfavorable for rapid progress of spring work and the proportion returned as done is only 64.6 per cent. In the Eastern states the temperature has been high and work is more advanced than usual. From Pennsylvania to Virginia there has been slight excess of rainfall, with low temperature, which has hindered spring work. In the Central West slight departure from normal precipitation has occurred, with some deficiency of heat, with such distribution as to delay farm operations, which are not so well advanced as usual in this region. The Pacific coast has been comparatively cool, and spring plowing has been delayed. Altogether the spring may be considered late and the work of the farm crowded into narrower limits.

### RANGE OF PRICES AT CHICAGO.

The daily range of prices of grain for May delivery at Chicago since May 1 has been as follows:

May.	Wheat.			Corn.			Oats.			Rye.		Barley.		Flaxseed.	
	Low.	High.	Closing.	Low.	High.	Closing.	Low.	High.	Closing.	Low.	High.	Low.	High.	Low.	High.
2	80	81 1/8	80	40 1/8	41 1/8	40 3/4	28 1/8	28 1/2	28 1/8	70 1/4	70 1/2	...	...	97 1/4	97 1/2
3	80 1/8	81 1/8	80 3/4	41	42 1/8	42 1/4	28 1/4	28 1/2	28 1/4	70 1/4	70 1/2	...	...	97 1/4	98
4	80 1/8	81 1/8	81 1/4	42 1/8	43 1/8	43	28 1/8	28 1/2	28 1/8	...	...	...	...	...	...
5	81 1/8	84 1/4	84	43 1/4	45	44 1/2	29 1/8	30 1/8	30	71 1/2	75 1/2	...	...	97 1/2	...
6	81 1/8	83 1/4	83 1/4	42 1/4	44 1/4	43 1/8	28 3/8	29 1/8	29 1/8	75	76	...	...	...	...
7	82	82 1/4	82 1/4	43 1/8	44 1/8	44 1/4	29 1/8	29 1/8	29 1/8	75	75 1/2	56	59	98	98
8	83	84 1/8	83 1/4	46	47 1/8	46 3/8	30 1/4	31	30 1/2	78	79	...	...	99 1/4	99 1/2
9	82 1/8	82 3/8	82 1/4	45 3/8	46 3/8	46 1/4	30 1/4	30 3/4	29 3/8	77	77	...	...	100	100
10	81 1/8	83	81 3/8	46 1/8	48 1/8	46 1/2	29 1/4	30 1/4	29 1/4	75	75 1/2	...	...	100	100
11	81 1/8	82 3/8	82 1/4	46 1/8	47 1/8	47 1/4	29 1/4	29 1/4	29 1/4	75	75	...	...	100	100
12	81 1/8	83 1/8	81 3/8	47 3/8	48 1/8	48 1/4	29 1/4	30 1/4	30 1/4	75	75	...	...	101	101
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

### NEBRASKA GRAIN DEALERS ORGANIZE AN ASSOCIATION.

A meeting of grain dealers and elevator men doing business in the state of Nebraska was held at Omaha April 20, to organize an association to promote their common interests. After discussing various questions the convention, which was well attended, elected the following directors: C. H. Fowler, Omaha; W. H. Ferguson, Hastings; N. A. Duff, Syracuse; H. O. Barber, Holdrege; George W. Wirt, York; F. L. Harris, Lincoln; A. W. Perry, Ord; J. A. Connor, Omaha, and F. C. Swartz, Omaha. The directors came together later at the Lincoln Hotel and chose the following officers: C. H. Fowler, president; W. H. Ferguson, vice-president; F. C. Swartz, secretary, and N. A. Duff, treasurer.

It was resolved to make Lincoln headquarters for meetings of the board of directors and the association and to hold annual meetings in that city. Although no other business was transacted the directors discussed plans of future action. It is to be hoped that those who have not joined will do so at their earliest opportunity. Any person who owns or operates an elevator or grain warehouse is eligible to membership. Over two weeks ago the association had a membership representing 350 of the 900 elevators in the state and many dealers have joined since.

The Nebraska Grain Dealers' Association can do much to further the interests of each and every member and therefore deserves the hearty support of every man in the trade.

The *Journal of Lincoln* says: "A lively race occurred over the election of a secretary. C. W. Cockrell, the broker of this city, was a candidate and offered to do the work for \$600 a year, but he was defeated by Swartz, who will draw twice that amount."

South America presents no new feature. More h—ll raised than wheat.—*Toledo Market Report*.



## WATERWAYS

Erie, Pa., received more grain in April than during any month before.

Grain vessels have been detained a considerable time at Port Huron elevators.

Mississippi River boats are carrying considerable quantities of grain this spring.

Ex-Senator Warner Miller spoke at Minneapolis April 28 on the Nicaragua Canal.

The steamer Tom Adams was 90 bushels short in a cargo of wheat at Buffalo recently.

Leaks caused the steamer Chicago to wet its cargo of wheat and corn unloaded recently at Buffalo.

By collision on Lake Erie the steamer Celtic was sent to the bottom recently with its cargo of grain.

The new whaleback barge 118 carried 85,000 bushels of wheat recently on a draft of 13 feet 3 inches.

Water poured through a broken pipe in the steamer Niko and wet 800 bushels of the cargo recently.

Grain trimmers at West Superior, Wis., have reduced their wages from \$1 to 50 cents per thousand bushels.

Toledo is receiving considerable wheat and corn by canal boats from Defiance, Napoleon and other points in Ohio.

The first of the grain fleet to leave Chicago were the steamers City of Paris and Sitka, April 9, bound for Buffalo.

A shortage of 92 bushels was recently discovered in the grain cargo of the John Owen when it arrived at Buffalo.

A movement is on foot to deepen the river at Green Bay, Wis., so large steamers can load at Cargill Bros.' elevator.

Another whaleback steamer, the Thomas Wilson, was launched at West Superior April 30. Its carrying capacity is 3,500 tons.

The steamer Sequin and consort Ogarita were short 90 and 70 bushels respectively on arrival at Kingston with wheat from Chicago.

Unexpected delay in opening the Cornwall Canal in the St. Lawrence River kept a score of grain laden vessels idle at Kingston recently.

On the Mississippi River are 7,453 vessels having a total tonnage of 3,393,380, and on the Great Lakes, 2,784 vessels, valued at \$48,941,474.

A cargo of corn aggregating 161,275 bushels, the largest ever shipped from Philadelphia, was loaded into the new steamer Caprivi at Elevator "B" May 6.

On the Trent Canal the Canadian Government has expended \$775,000, and recently appropriated \$74,000 to continue the work which is estimated to cost \$9,000,010.

The large Potomac which had stored a cargo of wheat since last fall arrived at Buffalo April 29 with thirty-five bushels wet, but the cargo overran 200 bushels, for a wonder.

The big steamer, Western Reserve, which went up the lakes from Buffalo to Chicago light and carried 100,000 bushels wheat at one cent a bushel, lost heavily on the business.

Thirty-five vessels were frozen in the ice outside of the harbor of Duluth May 1 unable to get away with their cargoes. In 1876 the last of the ice did not leave the harbor until June 29.

The Erie Canal was opened at midnight April 30 and forty-three boats cleared from Buffalo for New York with 338,810 bushels of grain, mostly flaxseed. Last year the canal was opened May 5.

On arrival at Buffalo with wheat from Duluth the Northwest was found to have 700 bushels wet. The loss falls on the owners of the grain as the survey at Buffalo showed the vessel blameless.

Last year steamers carried 20,181,483 tons; sailing vessels 19,302,949 tons, and unrigged vessels 13,940,000 tons of the 53,424,432 tons of freight moved on the Great Lakes and Mississippi River.

On account of low water this season the large lake vessels carry one-seventh less than last year. No one has yet formulated a theory that will coincide with the observed phenomena connected with the periodical changes in the levels of any of the Great Lakes.

A four-masted steel ship, the Lyderhorn, designed especially for the California wheat trade, was launched at Milford, Eng., on April 16. Every improvement known in the shipbuilding is contained in this vessel, including life-saving apparatus, and luxurious quarters for the of-

ficers. It will carry 4,500 tons of wheat. James De Wolf & Co., the owners, of Liverpool, expect to start it for San Francisco by June 1.

The New York State Legislature has passed a bill appropriating \$57,000 to complete the works on the Erie Canal, and \$540,000 to lengthen the locks and to deepen the Erie and Champlain Canals.

The schooner Sophia J. Luff with a cargo of corn from Chicago to Collingwood sprung a leak and water damaged the grain. Armour & Co. of Chicago bought the damaged corn and had it taken back in same vessel.

The plan of improving the Erie Canal now being followed out contemplates the lengthening of the locks so that two canal boats may pass without being uncoupled. A standard depth of seven feet will be maintained at all points.

Capt. Marshall, in charge of the Hennepin Canal work, paid land damages in Rock Island county last April. Some of the right of way has been cleared and fenced in. Specifications and estimates are being prepared for excavating.

Opponents to the 21-ft. channel for the waters connecting the Great Lakes have estimated the cost at \$300,000,000, declaring that the banks would have to be made of piling or stone. On the other hand competent engineers have placed the cost at \$72,000,000.

Canal tolls compelled the steamer H. R. James of the Ogdensburg Transit Company to load grain at Chicago May 4 for Buffalo instead of Ogdensburg. The vessel will continue on to Ogdensburg after unloading. In this instance Canada did not get the tolls nor did Canadian ports get the grain. Where does Canada profit by this discrimination?

The Canadian House of Commons on May 3 appropriated \$300,000 toward building the Soulanges Canal on the St. Lawrence River, parallel to the present Beauharnois Canal, which lacks sufficient depth and which can not be improved at less than the cost of the new canal. The estimated cost of this important work is \$4,750,000, of which \$11,304 have been expended.

The decline of the American shipping engaged in the foreign carrying trade dates from the panic of 1857. The decline was accelerated by the civil war following. In 1840 American bottoms carried 82.9 per cent. of the imports and exports, in 1882 only 15.5 per cent. In old times while wooden ships ruled the seas the United States held its own; but with the advent of iron steamers England with its cheap iron for ships began to monopolize the commerce of the world.

The Chicago Board of Marine Underwriters adopted the following rates on grain cargoes May 1, to go into effect at once, per \$100: To ports on Lake Michigan, 30 cents; Lake Superior, 50 cents; Lake Huron, Sarnia and Detroit River, 35 cents; Georgian Bay and Lake Erie, 40 cents; Lake Ontario, Ogdensburg and Montreal, 50 cents. The Montreal rate is remarkably low and it is intended to meet the competition of Canadian firms insuring grain from the shippers directly.

Last year the farmers of Charles Mix Co., S. D., produced 60,000 bushels of flaxseed, 600,000 bushels of wheat, and 1,500,000 bushels of corn, which they had to haul many miles to market on the railway. This means of transportation has proved so expensive that the farmers have sought to establish a line of boats to run on the Missouri River down to Sioux City, Ia. A delegation recently conferred with representatives of the Benton Transportation Company to effect this object.

## PHILADELPHIA'S GRAIN TRADE.

Last April Philadelphia received 1,016,222 bushels wheat, 3,160,017 bushels corn, 229,543 bushels oats, and 273,020 barrels flour, and exported, in fifty-six ships, 1,380,229 bushels wheat, 2,824,163 bushels corn, 9,802 bushels oats, and 184,772 barrels flour. Of the 4,063 cars corn received, 3,576 cars were graded No. 2 Mixed, 93 cars No. 2 Yellow, 57 cars No. 2 White, 224 cars No. 2 Steamer, 30 cars No. 3, and 59 cars No. 4; 12 cars were not graded and 7 were given No Grade.

In the first four months of 1892 Philadelphia received 1,900,075 bushels of wheat, 15,142,543 bushels of corn, 1,670,047 bushels of oats, and 1,216,010 barrels of flour; and shipped 2,040,914 bushels of wheat, 13,768,917 bushels of corn, 351,455 bushels of oats, and 700,773 barrels of flour; against receipts of 259,280 bushels wheat, 1,374,825 bushels corn, 1,136,700 bushels oats, and 349,831 barrels flour, and exports of 183,134 bushels wheat, 615,082 bushels corn, no oats, and 345,951 barrels flour in the corresponding four months of 1891. There was an increase in grain receipts amounting to 15,941,860 bushels, and in exports the increase was 15,363,070 bushels.

In the first week of May six ships left the port of Philadelphia with 389,684 bushels wheat, and 12 ships cleared with 1,142,428 bushels corn, a total of 1,522,112 bushels.

"A humbug" is the verdict of the people of Laredo, Tex., who have been watching the efforts of the rain makers to conjure rain clouds into existence.

Captain Finlay of the steamer Missouri which carried a cargo of flour and grain to Lihau has been presented with a silver tea service by the grateful Russians.

## Fires, Casualties, Etc.

The elevator at Marion, Kan., was recently burned.

Peterson Bros.' elevator at Eyota, Minn., was recently burned.

A malt house at Brooklyn, N. Y., was recently burned. Loss, \$75,000.

Houston Bros., grain dealers at Glenco, Ont., suffered loss by fire recently.

Douglas & Co., grain dealers at Winnipeg, Man., suffered loss by fire recently.

Harvey Lashbrook, grain dealer and storekeeper at Wales, Mich., recently suffered loss by fire.

McDonald's elevator at Cohourg, Ont., containing 8,000 bushels of grain was burned April 19.

C. C. Thompson & Co., dealers in grain and feed at Newark, N. J., suffered loss by fire recently.

Mr. T. M. C. Logan, grain dealer at River Sioux, Ia., suffered heavy loss by fire April 19. Insurance partial.

The corn cribs formerly used by the McAllister Elevator Company at Columbus, O., were burned recently.

The big elevator of the City Mills at Knoxville, Tenn., was damaged by fire May 5. Loss \$35,000; insurance \$20,000.

The elevator of Kudner & McCarty at Belford, Wis., was burned April 15 together with the hay sheds on the Flint & Pere Marquette Ry.

A warehouse at Sherman, Minn., owned by the Interstate Grain Company, was burned at midnight April 22, with 4,000 bushels of grain.

J. E. Tibbets & Co., dealers in grain and hay at Auburn, Me., lost \$5,000 by the burning of their storehouse April 27. Insurance \$3,000.

Green's feed store at Winnipeg, Man., was destroyed by fire at night May 1. Bawlf's grain warehouse was badly damaged at the same time.

Cotharin's grain elevator at Flint, Mich., was somewhat damaged by a fire April 14, which originated in the flour mill of J. E. Burroughs & Co.

Wm. B. H. Kerr's elevator at Hartland, Wis., was burned at night April 25 with about 7,000 bushels of corn and oats. Loss, \$7,000; partly insured.

Walter Stickney's fine elevator at Warren, Ill., was burned at 10 o'clock A. M., April 24, with 12,000 bushels of oats owned partly by farmers. Loss, \$10,000; insurance, \$6,000.

Henry Redhead was caught by a shaft in Rhodes Bros.' elevator at Estherville, Ia., April 29, and fatally injured. He was whirled around at the rate of 200 revolutions per minute.

John C. Ralston, proprietor of the grain elevator in Caledonia, Ill., was caught in a belt and dashed against a stone wall. Both bones in his right forearm were broken and his skull was crushed.

The "Union Mills" at Detroit, Mich., which manufacture linseed oil, meal and oil cake very extensively, were burned May 5, with a large stock of oil. The establishment has been burned many times. Loss, 40,000.

While returning from a sojourn at Hot Springs, Ark., L. T. Sowle, manager of the L. T. Sowle Elevator Company at Minneapolis, became suddenly insane at St. Louis, and was placed in a hospital.

Nash, Wright & Co.'s elevator at Serena, Ill., operated by H. S. Gilbert & Co., was burned at 5 o'clock A. M., April 27, with \$4,300 worth of grain. The building was valued at \$2,500 to \$3,000. Insured.

A malt storehouse at Brooklyn, N. Y., was burned at night April 20 with 70,000 bushels of malt. Loss \$90,000, covered by heavy insurance. The establishment was owned by the New York and Brooklyn Malting Company. An incendiary is supposed to have kindled the fire.

Theo. Lockwood's elevator on the Southern Kansas Railway track at Kansas City was burned April 13 with 4,000 bushels of grain. Mr. Lockwood had been greatly annoyed by pilferers, and was just leaving the elevator after having securely fastened the doors and windows when the fire was noticed at the further end. Loss covered by insurance.

The elevator at Bay City, Mich., built three years ago by the Michigan Central Railroad Company at a cost of \$32,000 and leased to Merrill, Fifield & Co., was burned on the afternoon of April 27. The fire started under the floor of the warehouse adjoining the elevator and spread with incredible rapidity. The building was insured. Merrill, Fifield & Co. lost \$15,000 on grain and hay, on which there was \$11,000 insurance.



# ELEVATOR AND GRAIN NEWS

An elevator is being built at Quanah, Tex.

A grain elevator is to be built at Clayton, Ill.

A grain elevator is being built at Peotone, Ill.

Two elevators are being built at Vernon, Tex.

A grain elevator is talked of at Elkhart, Mich.

Two elevators are being built at Childress, Tex.

A grain elevator is being built at Iowa Park, Tex.

R. H. Teepell is building an elevator at Loxa, Ill.

Mr. Stricker is building a granary at Howell, Mich.

E. Morrissey, grain dealer at Hampton, Neb., has sold out.

Conrad Gehl is building a brewery at Port Arthur, Ont.

Knapstein Bros. are building a malt house at Oshkosh, Wis.

M. E. Biggs of Frederick, Md., is building a grain elevator.

Dahl Bros. have completed their new elevator at Marshall, Minn.

O. Ottoson, dealer in grain and lumber at Badger, Ia., has sold out.

The Northern Seed Company of San Francisco, Cal., has sold out.

Iuman & Moag have started a grain and feed business at Toledo, O.

The Dubuque Malting Company has been organized at Dubuque, Ia.

Work has been commenced on the new grain elevator at Tyler, Minn.

The Calumet Grain Trimmers Union has been incorporated at Chicago.

The M. Brand Brewing Company is building a malt house at Chicago.

John H. Lawson, dealer in grain and feed at Drumbo, Ont., has sold out.

A malt house is being built at Peru, Ill., by the Union Brewing Company.

Harris & Grant, grain dealers at Winnipeg, Man., have dissolved partnership.

Fitch & Ladd, grain dealers at Somerville, Mass., have dissolved partnership.

Dole & Co., operating grain elevators at Chicago, have dissolved partnership.

J. B. M. Kehler & Co. of St. Louis, Mo., have gone into the grain business.

Four elevators are to be built at Parkston, Minn., in time to ship the next crop.

Correlly & Co. of Fort Worth, Tex., will build a cotton-seed oil mill at Dublin.

Eekhout & McLean, lumber dealers at Baltimore, have entered the grain export trade.

Middleton & Morrow are building a grain and cotton warehouse at Birmingham, Ala.

McCullom, Suffel & Taylor, grain commission dealers at Duluth, Minn., have sold out.

R. A. Dobied Company, grain dealers at Norfolk, Va., have failed. Liabilities, \$20,000.

Rumor has it that an English syndicate is about to buy up the elevators at Buffalo, N. Y.

A. L. Wheeler has bought W. H. McGuire & Co.'s Elevator "A" at Mooresville, Ind.

A brewery is being built at South Sioux City, Neb., by the Selzer Bros. Brewing Company.

The Protective Rice Milling Company is being organized at New Orleans to build a mill.

Fintel Bros. of Waukesha, Wis., have placed seed cleaning machinery in their elevator.

Jacob Kuebler & Co. of Sandusky, O., are enlarging their barley elevator and malt house.

The Snow Spring Distilling Company has been organized to build a distillery at Paris, Ky.

H. E. Dahlman has started a feed business in the farmers' Elevator at North Branch, Minn.

William Ritz, grain dealer at Rosenfeld, Man., has engaged in the farm machinery business.

A bin in the elevator of the Vassar Milling Company at Vassar, Mich., accidentally let 2,000 bushels of wheat down into the basement by the breaking of its bottom.

It probably got tired of holding up a load the barn builder had not provided for.

MacLeod & Denham, seedsmen at Los Angeles, Cal., have been succeeded by J. H. Denham.

The South Carolina Cotton Oil Company has been incorporated at Charleston to build mills.

William B. H. Kerr will rebuild his elevator at Hartland, Wis., which was recently burned.

A. Gutman, grain dealer at Botkins, O., has failed. Assets \$20,000, liabilities about the same.

A cotton-seed oil mill is being built at Corsicana, Tex., by Culberson, Scales & Co. of Paris, Tex.

The L. C. Porter Milling Company of Winona, Minn., will enlarge its elevator at Stockton, Minn.

No elevators have yet been built at Velasco, Tex. The reports circulated to that effect are untrue.

The elevator at Jonesboro, Ill., has given notice that it will be closed until the new crop comes in.

Walter L. Tooze, dealer in grain and merchandise at Woodburn, Ore., has sold his merchandise.

S. P. Lears & Son, grain dealers at Tacoma, Wash., will build a shingle mill at South Aberdeen.

The Trinity Cotton Oil Company has been incorporated at Dallas, Tex., with \$100,000 capital.

The Chatawa Cotton Oil Company will build a water power cotton-seed oil mill at Chatawa, Miss.

Taylor Bros. of Camden, N. J., are about to rebuild their elevator which was burned last winter.

A. F. Bullen of Chicago has bought a site for a malt house of at least 1,000,000 bushels' capacity.

The Itasca Cotton Seed Oil Company has been incorporated at Itasca, Tex., with \$50,000 capital.

The Boston & Maine Railroad Company will build a large terminal grain elevator at Boston, Mass.

Robert Parkinson, grain dealer at Mt. Carmel, Ill., failed May 3 with liabilities of about \$50,000.

C. R. Clough & Co., dealers in grain and flour at Lenoxville, Que., have enlarged their warehouse.

A 70,000-bushel elevator is being built at St. Joseph, Tex., by the Champion Roller Mill Company.

The Western Elevating Association of Buffalo, N. Y., at a recent meeting re-elected all its old officers.

Finch & Brown, dealers in grain and hay at Nashville, Tenn., have been succeeded by Finch & Miller.

The Weiser Milling Company of Weiser, Idaho, has commenced the erection of a large grain elevator.

The United States Grain Drying Company has been incorporated at Chicago to dry brewers' grains, etc.

The commissioners of Barton county, Neb., have exempted wheat from taxation. Why not corn also?

The four grain elevators at Cottonwood, Lyons Co., Minn., shipped 400,000 bushels of wheat last year.

Just & Co., grain dealers at South Lyon, Mich., shipped 1,771½ bushels wheat to Detroit in one car recently.

The Franklin Milling & Grain Company of Franklin, Ind., has failed. Liabilities \$10,000; assets \$25,000.

The Carman Farmers' Elevator Company of Carman, Man., is increasing its capital from \$10,000 to \$15,000.

Walker Bros., dealers in grain and produce at Boscobel, Wis., have been succeeded by Walker & Williams.

The Port Gibson Oil Works at Port Gibson, Miss., are being enlarged and new cotton-seed oil machinery added.

J. Brooks & Co., dealers in grain and flour at Portsmouth, N. H., have been succeeded by H. A. Yeaton & Son.

Thomas M. Ryan has completed his elevator at Buffalo, N. Y., and is transferring cargoes from vessels to canal boats.

Wendell & Crawford, grain dealers at Hartsburg, Neb., have placed a feed mill and new engine in their elevator.

The McFarlain Grain Company is shipping large quantities of corn and oats out of the big elevator at Rockwell City, Ia.

Six farmers have bought the grain warehouse at Wilsman, Ill., and rented it to Mr. Bolen, who is now doing business.

Kirwin Bros. & Co., dealers in grain and flour at Baltimore, have been succeeded by the Kirwin Bros. Grain Company.

Pressel & Replogle, proprietors of a grain elevator and corn mill at Moreland, Ind., have been succeeded by Replogle Bros.

Eldridge & Laird, dealers in grain and livestock and proprietors of a general store at Struble, Ia., have sold their store.

H. M. Olney & Co., the pushing grain dealers of Bangor, Mich., have, with the enterprise that is characteristic of them, built a 40,000-bushel elevator to handle their lively business. To drive the machinery they put in a

Charter Gasoline Engine made by the Charter Gas Engine Company of Sterling, Ill., which gives entire satisfaction.

The M., K. & T. Construction Company is building a 200,000-bushel elevator at Kansas City for Charles Counsellman & Co.

McIntyre & Wardwell, grain commission dealers at New York City, have been succeeded by a new firm of the same name.

A. L. Arragoni, a grain dealer on the Chicago Board of Trade, mysteriously disappeared May 6, and his trades were closed out.

The Hieber Brewing & Malting Company has been incorporated at Spokane, Wash. A malt house and brewery will be built.

The old grain warehouse at Ottawa, O., is being remodeled to an elevator by parties who will also deal in farm machinery.

C. H. Ferrell's granary at Montrose, Minn., was recently robbed of a quantity of wheat. The thieves were not apprehended.

D. D. McMillan & Sons, of Ft. Worth, Tex., are building a 40,000-bushel elevator at Chillicothe and another at Harrold.

W. T. McIlvain, dealer in grain and stock at Brainard, Neb., has joined in business with Joseph Matousek, dealer in lumber.

The York Foundry and Engine Company of York, Neb., is furnishing H. H. Leach of Boelus, Neb., with an elevator outfit.

The C. H. Albers Commission Company has been incorporated at St. Louis, Mo., by C. H. Albers, John W. Kauffman and others.

W. H. Ferguson of Palisade, Neb., is building a new elevator and is putting in the York Foundry and Engine Company's machinery.

The river at the Air Line Elevator in Chicago is being dredged so that boats can load some of the 650,000 bushels of wheat it contains.

C. O. Wilcox of Long Island, Kan., is putting in new machinery bought from the York Foundry and Engine Company of York, Neb.

The Midland Elevator Company of Woodbury county, Ia., has complied with the Nebraska warehouse law and will build elevators there.

D. Moyer has placed in his elevator at Leona, Kan., a No. 2 Warehouse Mill made by the Johnson & Field Company of Racine, Wis.

Barnes & Co. of Milledgeville, O., have bought a complete elevator outfit of the Barnard & Leas Manufacturing Company of Moline, Ill.

E. F. Hallack of Denver proposes to build a linseed oil mill if the farmers of Colorado will produce 50,000 bushels of flaxseed annually.

R. Pike, secretary of the St. Jacob F. M. B. A. Elevator Company of St. Jacob, Ill., have advertised for bids for building a grain elevator.

Six or seven buyers are continually on the market at Hartney, Man. Competition has been keen and farmers get good prices for their wheat.

A train load of wheat left Arizona, Kan., May 10 for New Orleans, decorated with advertisements of Harper, Sedgwick and Sumner counties.

J. M. Cox and E. D. Foster have bought Morrissey Bros' elevator at Hampton, Neb., and will operate it under the firm name of Cox & Co.

D. Ferrera & Co., dealers in hay and produce at Everett, Wash., have been succeeded by the Everett Supply Company, recently incorporated.

Johnson & Son of Vermont, Ill., have put in a complete elevator outfit furnished by the Barnard & Leas Manufacturing Company of Moline.

The Johnson & Field Company of Racine, Wis., has recently shipped one No. 3 Warehouse Mill to the Newton Elevator Company of Newton, Ia.

The Farmers' Elevator Company of Sheridan, Ill., has recently bought a No. 4 Heavy Warehouse Mill made by the Johnson & Field Company of Racine, Wis.

Wendell & Crawford are placing a six-horse power engine in their elevator at Bloomington, Ill., in place of a coal oil engine, which was too small for the work.

The Wilbur Seed Meal Company has been incorporated at Milwaukee, Wis. Capital stock \$150,000; incorporators, F. P. Wilbur, E. B. Marshall and A. J. Grant.

The United Elevator Company of St. Louis, Mo., has earned since July 1 enough to pay a dividend amounting to \$67,000 and has paid off a bonded debt of \$40,000.

The Johnson & Field Company of Racine, Wis., has recently placed one of its No. 5 Single Dustless Separators in the elevator of Whitlock & Field at Ladora, Ia.

C. Counsellman & Co. will have their big new cleaning house at South Chicago covered with a roof made of aluminum so alloyed as to be rust proof and need no painting. This novelty in elevator construction is attracting considerable attention from owners and builders



of elevators. The work is progressing rapidly under the direction of the Heidenreich Company of Chicago.

The Farmers' Elevator Company of Norcatur, Kan., has purchased a new outfit of elevating machinery from the York Foundry and Engine Company of York, Neb.

John Ellis and Mayor Rockwell of West Duluth are about to build a 50,000-bushel grain elevator at Duluth, Minn., to make a specialty of handling damaged wheat.

Paddock, Hodge & Co., grain dealers at Toledo, O., propose to lease the five Wabash elevators for the next ten years by paying a dividend of two per cent on the stock.

Exports of clipped oats from Chicago have been heavy of late. In two days recently Chicago elevators shipped out 321,357 bushels, weighing as much as 38 pounds per bushel.

Gay & Quinby, grain dealers at Albany, N. Y., failed May 5. Depreciation in the price of barley and the dullness in the trade caused the embarrassment. Assets equal to liabilities.

The Eclipse Elevator Company of Kansas City, Mo., has bought a No. 4 Victor Sheller and No. 4 Victor Cleaner of the Barnard & Leas Manufacturing Company of Moline, Ill.

Milton W. Lucy of Harvey, Lucy & Co., grain dealers at Baltimore, has retired from the firm and will go into business for himself. The old firm will continue as O. H. Harvey & Co.

The Davenport Malt and Grain Company of Davenport, Ia., is breaking ground for additional elevator capacity of 60,000 bushels, making a total storage capacity of 150,000 bushels.

The Hoopston Grain & Coal Company has been incorporated at Hoopston, Vermillion Co., Ill. Capital stock \$100,000; incorporators H. L. Bushnell, John Petry and W. I. Bushnell.

N. D. Thompson & Co., grain dealers at Topeka, Kan., have been succeeded by Bunker & West, J. E. Bunker of the old firm and J. G. West having formed a partnership to continue the business.

The Johnson & Field Company of Racine, Wis., has just shipped one of its No. 5 Single Dustless Grain Cleaners to the Charles Berghoefer & Lupinski Manufacturing Company of Milwaukee.

Barnett & Record, architects and builders of grain elevators at Minneapolis, Minn., are buying lumber for the "Daisy" Elevator and mill at West Superior, Wis., for which they have the contract.

The John Mullally Commission Company of St. Louis sued a number of grain speculators at St. Charles, Mo., for a balance due on a large wheat deal, but later withdrew the suit, paying the costs.

The Heidenreich Company of Chicago is figuring with parties in Russia for details of eighteen large storage and cleaning elevators and is preparing plans for the rearrangement of their cleaning system.

H. Cohen of San Francisco, Cal., contracted in April, 1891, to sell Max Brooks 10,000 sacks of No. 1 white wheat, but failed to deliver the wheat and Brooks began suit for \$2,307, for which he was given judgment.

The bill making an appropriation of \$100,000 for state grain elevators was defeated in the New York Legislature recently on the ground that it was an attempt to involve the state in business competition with its citizens.

The Northwestern Elevator at Benson, Minn., has been emptied of its grain on account of the side track being moved. The removal of the track has rendered the building useless, and it will have to be torn down or moved.

The Central Elevating Company has been incorporated at Buffalo, N. Y., to build a 1,000,000-bushel elevator. Capital, \$200,000; promoters, Charles A. Sweet, W. P. Northrup, Gertrude E. Lee, Simon Freischman, E. P. and C. J. Close.

The Cameron Mills & Elevator Company has been incorporated at Cameron, Tex. Capital stock, \$300,000; incorporators, Wm. Cameron of Waco, F. A. McDonald and F. A. McLennan of Ft. Worth. A system of elevators will be built.

A 100,000-bushel elevator is to be built at Wichita by the Bryan & Richardson Company of Sedgwick, Kan. It will have a capacity to clean twenty cars of grain every ten hours. The company wants plans and specifications for such a structure.

Union grain trimmers at West Superior, Wis., reduced their wages May 2 from \$1 to 50 cents per thousand bushels. This action angered the non-union men and next day a fight took place between rival gangs of trimmers. Many were badly beaten.

The big elevator at Fairport, O., received in the last half of April 300,000 bushels of corn and 60,000 bushels of wheat from vessels which was transferred to cars and taken East by the Pittsburg & Western Railway. Receipts at Fairport promise to be large.

Detroit's elevator capacity aggregates 3,100,000 bushels. The Union Elevator of the Wabash & Pacific has a storage capacity for 1,200,000 bushels; the Detroit Railroad Elevator, used by the Grand Trunk, L. S. & M. S., and D., G. H. & M., has room for 800,000 bushels, and

Elevators "A" and "B" have each a capacity for 550,000 bushels, and serve as terminals for the Michigan Central, Detroit, Lansing & Northern, and Flint & Pere Marquette Railways.

Richard Miller, employed as settling clerk by Tuttle & Co., grain dealers on the Chicago Board of Trade, has, it is alleged, made deals by which he became \$1,200 short. He was arrested and placed on trial, charged with obtaining money on false pretenses.

Albert E. Neely, the Chicago grain dealer and elevator man, has begun a suit for \$50,000 damages against the Charles Rietz & Bros. Lumber and Salt Company, who through sharp practices secured judgment by default on a note for \$400 which had not become due.

A meeting of the Board of Trade of St. Johns, N. B., was held May 6 to consider the erection of a grain elevator and to make provision for suitable terminal facilities at that port. It is proposed to ask a subsidy from the Dominion Government for this purpose.

The Boutwell Milling & Grain Company has been incorporated at Troy, N. Y. Capital stock, \$100,000; stockholders, Charles McCarthy, Charles A. Boutwell, Frank S. Black, Frank E. Howe and Hugh Galbraith; directors, Messrs. McCarthy, Boutwell and Galbraith.

The Grain Shovelers' Union of Buffalo met May 6 and nominated officers to be voted for May 20. The report of the treasurer showed that there was \$2,700 in the strong box. This is a large surplus for an organization that was started only two years ago without a dollar in the treasury.

The sacks made by the inmates of the California State Prison at San Quentin are sold to farmers in lots of 500 at a price fixed by the directors. No one but a wheat farmer can buy these jute sacks, and he cannot buy more than 500 at one time. The price paid ranges from 7 to 8 cents per bag.

The Missouri Valley Grain Company has been incorporated at Council Bluffs, Ia., to do a general grain business, and own and operate elevators, etc. Capital stock \$15,000; incorporators, John B. Christian, president; Milton E. Pinney, vice-president, and Charles Murray, secretary and treasurer.

Pinto's grain elevator at Brooklyn, N. Y., which was burned several months ago, has been rebuilt by Philip H. Gill, who had the contract, for \$50,000. The elevator can now handle 6,000 bushels of grain per hour with ease. Its equipment includes the latest improved machinery and some specialties patented by Mr. Gill.

The conveyor gallery which is being built between elevators A and X of the Great Northern system at West Superior, Wis., will be 459 feet long, 8 feet high and 8 feet wide. In the gallery a 30-in. belt will run with a carrying capacity of 500 to 700 bushels per minute, which is sufficient to empty Elevator X into A in fifty hours. The belt is 925 feet long.

The United States Treasury Department has decided that unless a difference between the invoice weight of grain passing from Canada through a frontier port in the United States and the weight actually arriving at the frontier port is found by official weighing at such port, no allowance can be made for any difference ascertained at the final port of entry.

The petition of the Farmers' Elevator Association of Farwell, Minn., was favorably considered by the state railroad commission, which has ordered the Soo road to lay a side track to the elevator. As set forth in our last issue the railroad company refused to permit the erection of the elevator on its right of way and also refused to lay a spur to it when completed.

The Peter Heid Grain Company has been incorporated at Appleton, Wis., to deal in all kinds of grain, hay, farm produce, lime, cement, etc. Capital stock, \$20,000; incorporators, Peter Heid, J. C. Lyons and Henry S. Holbrook. Mr. Heid will tear down his old elevator on the C. & N. W. Ry. and put up a warehouse, 84x40 feet, of brick and five stories high.

The Gilbert Grain Company has been incorporated at Minneapolis, Minn. Capital stock \$100,000; incorporators, John M. Bartlett of Minneapolis, Minn.; William Johnston of New Richmond, Wis.; James P. Moore and Clifford A. Gilbert of Minneapolis, Minn.; Charles Needham of Ottawa, Minn.; Eric Sevaton of Windom, Minn., and Charles Kittelson of Minneapolis, Minn.; officers, John M. Bartlett, president; William Johnston, vice president; James P. Moore, secretary and treasurer, and Clifford A. Gilbert, general manager.

The Wisconsin Malt & Grain Company has been incorporated at Appleton to build and operate an elevator and malt house. Bertin Ramsay is president, H. E. Wambold, secretary and treasurer, and C. W. Mory, superintendent and general manager. The plant will be built on the present site of Mr. Mory's elevator and will cost about \$50,000. The storage capacity will be 30,000 to 40,000 bushels and the malting capacity 200,000 bushels annually. To increase the storage capacity the elevators at Van Dyne, Hortonville and elsewhere will be enlarged.

It is getting most too warm to ship much grain by way of New Orleans. Of course a limited amount which can be quickly handled will go out for export during the entire year. The indications are that before another year the terminal facilities of New Orleans will be greatly increased. Kansas City shippers are growing more and

more friendly toward that port, and until some city farther up the river, like Memphis, say, becomes a deep water port, the bulk of the grain hereafter is likely to go that way. A gentleman recently returned from there says that several Northern capitalists have been looking about New Orleans with a view to constructing first-class terminal facilities and something will doubtless come of it in the near future.—*Kansas City Star*.

## ITEMS FROM ABROAD

Dominique & Morel, grain dealers at Dunkirk, France, failed recently, with liabilities aggregating \$250,000.

Portugal imported during 1891 4,136,000 bushels wheat, 17,000 bushels barley, 125 tons other cereals, and 31,000 240-pound sacks of flour.

In the first quarter of 1892 the United Kingdom imported 2,806,300 bushels of wheat, against 2,822,400 bushels in the first quarter of 1891.

Holland imported during March 1,624,000 bushels wheat, and 65,000 240-pound sacks flour, and exported 928,000 bushels wheat, and 24,000 sacks flour.

Great Britain will need to import more wheat than in former years because the area sown with wheat is much less than in 1891, 1890, or 1889, and the weather has been unfavorable this spring.

The continent of Europe imported from August 1 to April 23 34,897,000 bushels corn, of which 27,471,000 were from North America, 6,660,000 from Southeastern Russia, and 700,000 from other countries.

India will not have so large a crop of wheat as last year on account of drouths in the Punjab, in Bengal, and in the South of the Bombay provinces. In the Northwest the crop is better than for many years.

France will raise the duty on wheat June 1 from three francs to five francs per 100 kilograms. (From 60 cents to \$1 per 220 pounds). The duty on flour will be increased a greater per cent., from six francs to eight francs.

The United Kingdom imported from August 1 to April 23 44,882,000 bushels corn, of which 34,286,000 came from North America, 8,810,000 from Southern Russia, 51,000 from the Argentine Republic, and 1,748,000 bushels from other countries.

The Argentine Republic is shipping more wheat this season than ever before. The last crop was heavy and of a superior quality. The farmers have purchased improved reapers and threshing machines, and are better able to handle their harvest.

Last year the Argentine Republic devoted 3,306,000 acres to wheat, against 1,035,000 acres in 1889, 824,000 acres in 1888, and 686,000 acres in 1887. A similar increase took place in the corn acreage, which was 1,685,000 last year, 850,000 in 1889, 832,000 in 1888, and 330,000 in 1887.

Australia and New Zealand shipped in the sixteen weeks ending April 23, 2,912,000 bushels of wheat and flour combined, against 6,968,000 bushels in the corresponding period of 1891, which show that that part of the world is not likely to contribute largely to the world's supply of wheat.

Russia has shipped since August 1 and up to April 23, from ports on the Baltic Sea, 1,680,000 bushels wheat, from ports on the Black Sea, 67,608,000 bushels wheat, and of corn from the Black Sea 15,377,000 bushels, and of barley from the Black Sea 34,000,000 bushels, and from the Baltic 650,000 bushels.

The Russian Government received advices May 10 that winter wheat is in good condition in the Polish, Baltic, Northwestern and Southwestern provinces, Central Russia, the Crimea, and the Caucasus. In Kherson the wheat crop is unsatisfactory, while in the North and East the grain has not yet sprouted.

In March France imported 7,208,000 bushels wheat, and 24,500 240-pound sacks flour, and exported 3,200 bushels wheat and 5,200 sacks flour. During the eight months ending with March 70,664,000 bushels of wheat and flour as wheat were imported, against 27,928,000 bushels in 1890-'91, and 18,704,000 bushels in 1889-'90.

At London recently the committee on weights and measures of Parliament opened the receptacle wherein the standards had been deposited in 1853. A microscopical examination showed that they had not been affected by friction or atmospheric changes in the thirty-nine years that have elapsed. These antiquated weights and measures are still used in Great Britain and her dependencies.

Receipts of wheat at Rosario, Argentine Republic, in February by the three chief railroads, were over 550,000 bags, and in the first half of March 250,000 bags. Exports were also unusually heavy during the latter period because many ships that had been held for a fall in wheat were then started for Europe. Exports will continue in a less volume until October. The new corn is in good condition but not dry enough to ship.



# PRESS COMMENT.

## BELIEVES IN REGULATING EVERY BUSINESS BUT HIS OWN.

The grangers who hold the whip-hand in the Nebraska Legislature have passed an eight-hour law for all wage-earners except farm hands and domestic servants. The granger is not different from his fellow-Christians engaged in other occupations. He believes in making laws to regulate everybody's business but his own.—*Philadelphia Record*.

## PROGRESS OF THE METRIC SYSTEM.

The decimal or metric system seems to make steady, though very gradual, progress in public favor. In spite, however, of the accumulating evidence regarding the advantages to be gained from the adoption of the metric system, the general public continues to be imperfectly informed and apathetic, so that energetic action is necessary to awaken them to a sense of the importance of the interests at stake.—*Bradstreet's*.

## EFFECT OF SPECULATIVE SALES.

The underlying fallacy in the demand for the suppression of option sales is the idea that speculators really make the market; on the contrary, speculative sales, to have any permanent effect upon prices, must be based upon business conditions; they are not, therefore, causes of a rise or decline, but outward expressions of trade forces. Their only original feature is to register the results of those forces more rapidly.—*New York Post*.

## THE MINORITY REPORT.

The minority report of Mr. Moore on the recently closed wheat investigation is understood to have been prepared by a St. Paul attorney who has recently acquired some reputation in connection with his championship, in florid oratory, of the cause of the Alliance organization of this state. His purpose is to prejudice the mind of the Minnesota farmer—not to furnish it with the arguments which address themselves to sound reason and common sense. That evils in the grain trade exist we shall not question. But there is no remedy for them in the demagogic rant of the St. Paul criminal attorney.—*Winona (Minn.) Republican*.

## EFFECT OF THE PROPOSED ANTI-OPTION LAW.

If the Hatch Bill in its present shape becomes a law, and that law be enforced, the result will be a disbandment of many of the Boards of Trade in this country, and a reduction in the membership of the rest. The inducements to pay for the collection of crop information will be so much diminished, and the ability to pay for it correspondingly cut down, that the news will not be gathered and published except by the slow coach methods of the General Government. This, as well as the abolition of short selling and long buying in produce, is counted on and wished for by the men who advocate the passage of the Hatch Bill. In other words, they want to cut off the very features on which Russia is now looking with longing eyes as constituting the one thing needful to an intelligent solution of the food problem in that country.—*Chicago Tribune*.

## WELLAND CANAL TOLLS.

Considerable feeling is being evidenced in the matter of tolls on the Welland Canal cargoes of Western grain and retaliatory measures are generally indorsed. To those shippers who advocate high-handed demands on the Canadian government toward abrogating the canal tolls entirely, and others who are brimful of the spirit of retaliation in measure, we would say a little circumspection is perhaps necessary as we find that to enter or leave Lake Erie at either end, the Dominion government are masters of the situation, and the same is equally true of Lake Ontario, the St. Lawrence system of canals forming the eastern bar and the mouth of Detroit River the western bar. At the same time there is no sense of international comity in Canada foisting upon United States commerce the entire cost of construction and keep up of the Welland Canal. Rather will grain be diverted to New England points and the Montreal shipments steadily decline until the splendidly constructed waterway finally falls into disuse.—*Marine Record*.

## OBJECTS OF ORGANIZATION.

The meeting of the elevator men of Nebraska is to form a state organization for mutual benefit. The general purpose is to unite the grain dealers of Nebraska into a protective association which shall have strength enough in its membership to induce the railroads to deal fairly with Nebraska shippers and aid them in building up local markets. It should be accepted as a fact that this is not for the purpose of forming a trust with which to control the grain business of Nebraska. Such an association as is contemplated can make itself felt for the benefit of the grain business of the state. It can by combining the interests of grain men along the several competing lines force the railways to revise tariffs which are unfair, to grant milling-in-transit rates and

make such other concessions as experience has shown are essential to the growth of the local markets. There are other subjects affecting the grain buyers themselves, such as rates of commission, dealings with Eastern buyers, rating the grain and the like, which will receive attention.—*Omaha Bee*.

## THE CURSE OF SPECULATION.

The great curse of speculation results from men of limited means taking risks which they are unable to bear if the deal goes against them. Yet, in their desire to win they forget the consequences and bring upon themselves financial troubles they are ill prepared for. Speculation is all very well for men of means, who, when reverses overtake them, are able to either protect their deals or make their losses, and start again; but for men of circumscribed capital to enter the wheat pit or the slaughter pen of pork in Chicago it is certain ruin.—*Trade Bulletin, Montreal*.

# THE EXCHANGES

Tickets of membership in the Minneapolis Chamber of Commerce have declined, and are now selling at \$340 to \$350.

The grain inspection committee of the Kansas City Commercial Exchange has recommended that the directors vest power in the committee to suspend the grain inspectors without pay.

The directors of the Cincinnati Chamber of Commerce held a special meeting May 10 to discuss the report of the grain committee in the matter of resealing cars of grain after inspection.

Tickets of membership in the New York Produce Exchange are selling at \$760, which is \$15 less than a month ago. Even this seems a high valuation when tickets have recently been renting at only \$25 a year.

The grain committee of the Philadelphia Commercial Exchange is considering the matter of establishing grades of No. 1 Hard Spring, Nos. 1 and 2 Northern Spring, No. 3 Spring and Rejected Spring Wheat.

In compliance with the Saturday half-holiday law recently passed by the Maryland Legislature the executive committee of the Baltimore Corn and Flour Exchange has ordered that business be closed at noon, the last call taking place at 11:45 A. M.

Privilege trading is again creeping into the Chicago Board of Trade. Those commission firms that are obeying the orders of the directors and rules of the Board are not getting a fair deal as long as the others trade in puts and calls. It should be stopped.

Russia is reported by our consul as about to establish Boards of Trade in each province of that country. That is the brightest outlook we have seen for Russian civilization. And they have no Hatches or Washburns there. Blessed country.—*Toledo Market Report*.

A committee of grain men representing the Philadelphia Chamber of Commerce will confer with the Philadelphia & Reading Railroad Company in regard to the recent order of the latter respecting abridgement of privilege of holding cars at junction points for reconsignment.

The initiation fee of the Baltimore Corn and Flour Exchange is \$2 500; and tickets of membership are nominally worth that sum, but actually are selling at less than \$100. To remedy this an amendment to the constitution is being considered by the directors reducing the initiation fee to \$500.

The Philadelphia Chamber of Commerce at its annual meeting, held April 28, elected officers as follows: Francis M. Brooke, president; John E. Daley, treasurer, and John H. Michener, William A. Dufor, V. P. McCulley, Joseph Bosler, J. W. Supplee, James M. Hall, William Brice and Lincoln K. Passmore, managers.

We are indebted to William Thurstone, secretary of the Buffalo Merchants' Exchange, for a copy of his annual report for 1891, containing in small compass a vast quantity of statistics respecting the commerce of the city, and especially the grain trade, concerning which much interesting information is detailed in the reports of officers and committees.

Some members, both young and old, of the Kansas City Commercial Exchange, persist in throwing grain over the floor during trading hours, greatly annoying those who do not indulge in this questionable sport. To put an end to this holier-than-thou conduct the directors recently appointed Max Mintner, Wyan Nelson and E. E. Moffat conservators of the peace, with instructions to make it interesting for these found violating rule 5 of the regulations.

The Detroit Board of Trade has ruled that "a carload of grain for present delivery, or to arrive, shall consist of an ordinary receipt of any of the railway elevators for 500 bushels; except that a carload of oats shall consist of 32,000 pounds (1,000 bushels), and a carload of barley 30,000 pounds. Any greater or less amount, or any sales

or receipts from private elevators, must be specified at the time of sale." When sold for future delivery the above quantities constitute a carload, and form the basis of settlement.

A refusal to pay inspection fees on grain consigned to them caused the suspension of Austin P. and Radcliffe Baldwin from the New York Produce Exchange May 5. All grain from the West is inspected by the grain committee, according to the rules of the Exchange, and the fees paid by the consignee. Austin Baldwin & Co., being agents of the Allan Line Steamship Company, declined to pay the fees on the ground that they were common carriers and therefore exempt. The board of managers thought differently and suspended the firm after \$179 had become due.

The Milwaukee Chamber of Commerce at a meeting held April 27 adopted a strong declaration vigorously yet respectfully protesting against the Anti-Option Bill, H. R. 7,845, giving six weighty reasons why it should not become a law. If enacted the bill would violate the spirit of the Constitution of the United States by levying a tax ostensibly for revenue as authorized by the Constitution, but really to exercise authority over commercial transactions between citizens of the state, a power not delegated to the Government by the Constitution, the direct exercise of which would be the grossest usurpation. Other arguments, equally cogent, were unanimously adopted by the Chamber.

# LATE PATENTS

Issued on April 12, 1892.

BALING PRESS.—Henry L. Whitman, St. Louis, Mo. (No model.) No. 472,838. Serial No. 400,743. Filed July 25, 1891.

AUTOMATIC GRAIN SCALE.—Thomas F. Gray, Monroeville, O. (No model.) No. 472,872. Serial No. 412,131. Filed Nov. 17, 1891.

RECORDING DEVICE FOR SCALES.—George E. Miller, Lynn, assignor to William A. Macleod and Benjamin Dickerman, Boston, Mass. (No model.) No. 472,642. Serial No. 424,394. Filed Nov. 15, 1890. Renewed March 10, 1892.

Issued on April 19, 1892.

GAS ENGINE.—James A. Charter, Stirling, Ill. (No model.) No. 473,293. Serial No. 391,396. Filed May 2, 1891.

BALING PRESS.—William A. Laidlaw, Cherokee, Kan. (No model.) No. 473,320. Serial No. 394,731. Filed June 1, 1891.

ENDLESS CHAIN ELEVATOR.—Benjamin Arnold, East Greenwich, R. I. (No model.) No. 473,203. Serial No. 416,164. Filed Dec. 26, 1891.

Issued on April 26, 1892.

REGISTER FOR GRAIN MEASURES.—John A. James and David James, Coffeyville, Kan. (No model.) No. 473,465. Serial No. 394,919. Filed June 3, 1891.

BALING PRESS POWER.—Plin C. Southwick, Newark, Ill. (No model.) No. 473,645. Serial No. 413,043. Filed Nov. 25, 1891.

DUST COLLECTOR AND GRAIN CLEANER.—Philip Haeckler, Minneapolis, Minn. (No model.) No. 473,662. Serial No. 402,604. Filed Aug. 14, 1891.

HORSE POWER.—Andrew M. Wead, Kalamazoo, Mich., assignor to Kirk A. Smith and Willis N. Pomeroy, same place. (No model.) No. 473,683. Serial No. 418,786. Filed Jan. 21, 1892.

GRAIN CLEANER AND SCOURER.—George A. Smith, Paulding, O. (No model.) No. 473,794. Serial No. 406,964. Filed Sept. 26, 1891.

Issued on May 3, 1892.

CONVEYOR.—Joseph H. Di-l, Stockton, Cal. (No model.) No. 474,002. Serial No. 404,566. Filed Sept. 2, 1891.

MACHINE FOR HULLING OATS, BARLEY AND OTHER GRAINS.—James E. Davis, Milwaukee, Wis. (No model.) No. 474,164. Serial No. 381,668. Filed Feb. 16, 1891.

## TRADEMARKS.

[Issued since our last publication.]

OATS, WHEAT AND BUCKWHEAT.—James Butler, New York, N. Y. Application filed March 30, 1892. No. 21 030. Used since March 1, 1892. The word "TRIUMPH."

Joseph Greenbaum of Chicago made a deal in wheat by which he claimed to have lost \$18,000, and refused to marry Miss Irma Heibrou of Milwaukee, as he had promised. She has begun suit for \$25,000 for breach of promise. Let this be warning to prospective bridegrooms not to speculate in wheat.



## THE STATE MAY FIX ELEVATOR CHARGES.

The Supreme Court of the United States has recently handed down its decision in the Budd case, in which the constitutional power of a state to regulate charges for public services, and an extensive consideration of what constitutes public services, is involved. The case arose under the elevator and warehouse law of New York, and came to the Supreme Court of the United States on appeal from a decision by the Court of Appeals of New York, sustaining the validity of the law.

The Court of Appeals of New York, in its opinion in the Budd case, considered fully the question as to whether the Legislature had power, under the Constitution of the state of New York, to prescribe a maximum charge for elevating grain by stationary elevators, owned by individuals or corporations who had appropriated their property to that use, and were engaged in that business; and it answered the inquiry in the affirmative. It also reviewed the case of *Munn vs. Illinois*, and arrived at the conclusion that the United States Supreme Court there held that the legislation in question in that case was a lawful exercise of legislative power, and did not infringe that clause of the fourteenth amendment to the Constitution of the United States which provides that no state shall "deprive any person of life, liberty or property without due process of law;" that the legislation in question in that case was similar to, and not distinguishable in principle from, the act of the state of New York. The Court of Appeals further examined the question whether the power of the Legislature to regulate the charge for elevating grain, where the business was carried on by individuals upon their own premises, fell within the scope of police power, and whether the statute in question was necessary for the public welfare. It affirmed that, while no general power resided in the Legislature to regulate private business, prescribe the conditions under which it should be conducted, fix the price of commodities or services, or interfere with freedom of contract, and while the merchant, manufacturer, artisan, and laborer, under our system of government, are left to pursue and provide for their own interests in their own way, untrammelled by burdensome and restrictive regulations, which, however common in rude and irregular times, are inconsistent with constitutional liberty, yet there might be special conditions and circumstances which brought the business of elevating grain within principles which, by the common law and the practice of free governments, justified legislative control and regulation in the particular case, so that the statute would be constitutional; that the control which, by common law and by statute, was exercised over common carriers, was conclusive upon the point that the right of the Legislature to regulate the charges for services in connection with the use of property did not depend in every case upon the question whether there was a legal monopoly or whether special governmental privileges or protection had been bestowed; that there were elements of public interest in the business of elevating grain which peculiarly affected it with a public interest; that those elements were found in the nature and extent of the business, its relation to the commerce of the state and country, and the practical monopoly enjoyed by those engaged in it; that about 120,000,000 bushels of grain come annually to Buffalo from the West; that the business of elevating grain at Buffalo is connected mainly with lake and canal transportation; that the grain received at New York in 1887 by way of the Erie Canal and Hudson River, during the season of canal navigation, exceeded 46,000,000 bushels—an amount very largely in excess of the grain received during the same period by rail, and by river and coastwise vessels; that the elevation of that grain from lake vessels to canal boats takes place at Buffalo, where there are thirty or forty elevators, stationary and floating; that a large portion of the surplus cereals of the country passes through the elevators at Buffalo, and finds its way through the Erie Canal and Hudson River to the seaboard at New York, whence it is distributed to the markets of the world; that the business of elevating grain is an incident to the business of transportation, the elevators being indispensable instrumentalities in the business of the common carrier, and in a broad sense performing the work of the carriers, being located upon or adjacent to the waters of the state, and transferring the cargoes of grain from the lake vessels to the canal boats or from the canal boats to the ocean vessels, and thereby performing an essential service in transportation; that by their means the transportation of grain by water from the upper lakes to the seaboard is rendered possible; that the business of elevating grain thus has a vital relation to commerce in one of its most important aspects; that every excessive charge made in the course of the transportation of grain is a tax upon commerce; that the public has a deep interest that no exorbitant charges shall be exacted at any point upon the business of transportation; and that whatever impaired the usefulness of the Erie Canal as a highway of commerce involved the public interest, that the case fell within the principle which permitted the Legislature to regulate the business of common carriers, ferrymen, and hackmen, and interest on the use of money; that the underlying principle was that business of certain kinds holds such a peculiar relation to the public interest there is superinduced upon it the right of public regulation, and that the court rested the power of the Legislature to control and regulate elevator charges upon the nature and extent of the business, the existence of the virtual monopoly, the benefit derived from the Erie Canal's creating the business and making it possible, the interest to trade and commerce, the relation of the

business to the property and welfare of the state, and the practice of legislation in analogous cases, collectively creating an exceptional case, and justifying legislative regulation. The opinion further said that the criticism to which the case of *Munn vs. Illinois* had been subjected proceeded mainly upon a limited and strict construction and definition of the police power; that there was little reason, under our system of government, for placing a close and narrow interpretation on the police power, or restricting its scope so as to hamper the legislative power in dealing with the varying necessities of society, and the new circumstances, as they arise, calling for legislative intervention in the public interest; and that no serious invasion of constitutional guarantee by the legislature could withstand for a long time the searching influence of public opinion, which was sure to come sooner or later to the side of law, order, and justice, however it might have been swayed for a time by passion or prejudice, or whatever aberration might have marked its course.

Quoting these selections from the opinion of the Court of Appeals, the Supreme Court of the United States say: "We regard these views which we have referred to as announced by the Court of Appeals of New York, so far as they support the validity of the statute in question, as sound and just. This court, in *Munn vs. Illinois*, the opinion being delivered by Chief Justice Waite, and there being a published dissent by only two justices, considered carefully the question of the repugnancy of the Illinois statute to the fourteenth amendment. It said that under the powers of government inherent in every sovereignty, 'the Government regulates the conduct of its citizens one toward another, and the manner in which each shall use his own property, when such regulation becomes necessary for the public good,' and that, 'in their exercise it has been customary in England from time immemorial, and in this country from its first colonization, to regulate ferries, common carriers, hackmen, bakers, millers, wharfingers, innkeepers, etc., and in so doing to fix a maximum of charge to be made for services rendered, accommodations furnished, and articles sold.'" It was added: "To this day statutes are to be found in many of the states upon some or all these subjects, and we think it has never yet been successfully contended that such legislation came within any of the constitutional prohibitions against interference with private property." It announced as its conclusion that down to the time of the adoption of the fourteenth amendment it was not supposed that statutes regulating the use, or even the price of the use of private property necessarily deprived an owner of his property without due process of law; that when private property was devoted to public use it was subject to public regulation; that *Munn and Scott* in conducting the business of their warehouse, pursued a public employment and exercised a sort of public office, in the same sense as did a common carrier, miller, ferryman, innkeeper, wharfinger, baker, cartman or hackney coachman; that they stood in the very gateway of commerce and took toll from all who passed; that their business tended "to a common charge," and had become a thing of public interest and use; and that the toll on the grain was a common charge; and that, according to Chief Justice Hale, every such warehouseman "ought to be under a public regulation, viz., that he 'take but a reasonable toll.'"

This court further held, in *Munn vs. Illinois*, that "the business in question was one in which the whole public had a direct and positive interest; that the statute of Illinois simply extended the law so as to meet a new development of commercial progress; that there was no attempt to compel the owners of the warehouses to grant the public an interest in their property, but to declare their obligations if they used it in that particular manner; that it mattered not that *Munn and Scott* had built their warehouses and established their business before the regulations complained of were adopted; that the property being clothed with a public interest, what was a reasonable compensation for its use was not a judicial but a legislative question; that in countries where the common law prevailed, it had been customary from time immemorial for the Legislature to declare what should be a reasonable compensation under such circumstances, or fix a maximum beyond which any charge made would be unreasonable; that the warehouses of *Munn and Scott* were situated in Illinois, and their business was carried on exclusively in that state; that the warehouses were no more necessarily a part of commerce itself than the dray or the cart by which, but for them, grain would be transferred from one railroad station to another; that their regulation was a thing of domestic concern; that until Congress acted in reference to their interstate relations the state might exercise all the powers of the government over them, even though in so doing it might operate indirectly upon commerce outside its immediate jurisdiction; and that the provision of Section 9 of Article 1 of the Constitution of the United States, operated only as a limitation of the powers of Congress and did not affect the states in the regulation of their domestic affairs. The final conclusion of the court was that the act of Illinois was not repugnant to the Constitution of the United States, and the judgment was affirmed." The court then takes up the cases in which the *Munn* case has been cited as authority, and traces the history of that case in its impress upon subsequent decisions, and, continuing, say: "We must regard the principles maintained in *Munn vs. Illinois* as firmly established; and we think it covers the present cases, in respect to the charge for elevating, receiving, weighing and discharging the grain, as well as in respect to the charge for trimming and shoveling to the leg of the elevator when loading, and trimming the cargo when loaded. If the shovelers or scoopers choose, they might do the shoveling by hand or might use a

steam shovel. A steam shovel is owned by the elevator owner and the power for operating it is furnished by the engine of the elevator; and if the scooper uses the steam shovel he pays the elevator owner for the use of it.

"The answer to the suggestion that by the statute the elevator owner is forbidden to make any profit from the business of shoveling to the leg of the elevator is that made by the Court of Appeals of New York in the case of *Budd*, that the words, 'actual costs,' used in the statute, were intended to exclude any charge by the elevator owner beyond the sum specified for the use of his machinery in shoveling and the ordinary expenses of operating it, and to confine the charge to the actual cost of the outside labor required for trimming and bringing the grain to the leg of the elevator; and that the purpose of the statute could be easily evaded and defeated if the elevator owner were permitted to separate the services, and to charge for the use of his steam shovel any sum which might be agreed upon between himself and the shovelers' union, and thereby, under color of charging for the use of his steam shovel, to exact of the carrier a sum for elevating beyond the rate fixed by the statute.

"We are of the opinion that the act of the Legislature of New York is not contrary to the fourteenth amendment to the Constitution of the United States, and does not deprive the citizen of his property without due process of law; that the act, fixing the maximum charges which it specifies, is not unconstitutional, nor is it so in limiting the charge for shoveling to the actual cost thereof; and that it is a proper exercise of the police power of the state.

"It is further contended that under the decision of this court in *Railway Company vs. Minnesota*, 134 U. S. 418, 10 Sup. Ct. Rep. 462, the fixing of elevator charges is a judicial question as to whether they are reasonable or not; that the statute must permit and provide for a judicial settlement of the charges, and that by the statute under consideration an arbitrary rate is fixed, and all inquiry is precluded as to whether that rate is reasonable or not.

"But this is a misapprehension of the decision of the court in the case referred to. In that case the Legislature of Minnesota had passed an act which established a Railroad and Warehouse Commission, and the Supreme Court of that state had interpreted the act as providing that the rates of charges for the transportation of property by railroads, recommended and published by the commission, should be final and conclusive as to what were equal and reasonable charges, and that there could be no judicial inquiry as to the reasonableness of such rates. A railroad company, in answer to an application for a mandamus, contended that such rates in regard to it were unreasonable, and as it was not allowed by the state court to put in testimony in support of its answer on the question of reasonableness of such rates, this court held that the statute was in conflict with the constitution of the United States as depriving the company of its property without due process of law and depriving it of the equal protection of the laws. That was a very different case from one under the statute of New York in question here, for in this instance the rate of charges is fixed directly by the Legislature. What was said in the opinion of the court in the *Minnesota* case had reference only to the case then before the court, and to charges fixed by commission appointed under an act of the Legislature, under a constitution of the state which provided that all corporations, being common carriers, should be bound to carry, 'on equal and reasonable terms,' and under a statute which provided that all charges made by a common carrier for the transportation of passengers or property should be 'equal and reasonable.'

"What was said in that opinion as to the question of the reasonableness of the rate of charge being one for judicial investigation had no reference to a case where the rates are prescribed directly by the legislature. Not only was that the case in the statute of Illinois in *Munn vs. Illinois*, but the doctrine was laid down by this court in *Railway Company vs. Illinois*, 118 U. S. 557, 568, 7 Sup. Ct. Rep. 4, that it was the right of a state to establish limitations upon the power of a railroad company to fix the price at which they would carry passengers and freight, and that the question was of the same character as that involved in fixing the charges to be made by persons engaged in the warehousing business. So, too, in *Dow vs. Beidleman*, 125 U. S. 680, 686, 8 Sup. Ct. Rep. 1,028, it was said that it was within the power of the legislature to declare what would be a reasonable compensation for the services of persons exercising a public employment, or to fix a maximum beyond which any charge made would be unreasonable.

"But in *Dow vs. Beidleman*, after recognizing the doctrine that the Legislature may itself fix a maximum, beyond which any charge would be unreasonable in respect to services rendered in a public employment, or for the use of property in which the public has an interest, subject to the proviso that such power of limitation or regulation is not without limit and is not a power to destroy, or a power to compel the doing of the services without reward, or to take private property for public use without just compensation or without due process of law, the court said that it had no means, 'if it would under any circumstances have the power' of determining that the rate fixed by the legislature in that case was unreasonable, and that it did not appear that there had been any such confiscation of property as amounted to a taking of it without due process of law, or that there had been any denial of the equal protection of the laws."

In dissenting from the foregoing opinion of the court Mr. Justice Brewer, speaking for himself and for Mr. Justice Field and Mr. Justice Brown, says: "I dissent from the opinion and judgment in these cases. The main propo-



sition upon which they rest is, in my judgment radically unsound. It is the doctrine of *Munn vs. Illinois*, 94 U. S. 113, reaffirmed. That is, as declared in the syllabus and stated in the opinion in that case: 'When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good, to the extent of the interest he has created.' The elaborate discussion of the question in the dissenting opinions in that case and the present cases, when under consideration in the Court of Appeals of the state of New York, seems to forbid anything more than a general declaration of dissent. The vice of the doctrine is that it places a public interest in the use of property upon the same basis as a public use of property. Property is devoted to a public use when, and only when the use is one which the public, in its organized capacity, to-wit, the state, has a right to create and maintain, and therefore one which all the public have a right to demand and share in. The use is public, because the public may create it, and the individual creating it is doing thereby, and *pro tanto* the work of the state. The creation of all highways is a public duty. Railroads are highways. The state may build them. If an individual does that work he is *pro tanto* doing the work of the state. He devotes his property to public use. The state doing the work fixes the price for the use. It does not lose the right to fix the price because an individual voluntarily undertakes to do the work. But this public use is very different from a public interest in the use. There is scarcely any property in whose use the public has no interest. No man liveth unto himself alone, and no man's property is beyond the touch of another's welfare. Everything, the manner and extent of whose use affects the wellbeing of others, is property in whose use the public has an interest. Take, for instance, the only store in a little village. All the public of that village are interested in it; interested in the quantity and quality of the goods on its shelves and their prices, in the time at which it opens and closes, and, generally in the way in which it is managed; in short, interested in the use. Does it follow that that village public has a right to control these matters? That which is true of the single small store in the village is also true of the largest mercantile establishment in the great city. The magnitude of the business does not change the principle. There may be more individuals interested, a larger public, but still the public. The country merchant who has a small warehouse in which the neighboring farmers are wont to store their potatoes and grain preparatory to shipment occupies the same position as the proprietor of the largest elevator in New York. The public has in each case an interest, no more and no less. I cannot bring myself to believe that when the owner of property has, by his skill, industry and money made a certain piece of his property of large value to many, he has thereby deprived himself of the full dominion over it which he had when it was of comparatively little value; nor can I believe that the control of the public over one's property or business is at all dependent upon the extent to which the public is benefited by it.

"The paternal theory of government is to me odious. The utmost liberty to the individual and the fullest possible protection to him and his property, is both the limitation and duty of government. If it may regulate the price of one service which is not a public service, or the compensation for the use of one kind of property, which is not devoted to public use, why may it not with equal reason regulate the price of all service, and the compensation to be paid for the use of all property? And, if so, 'looking backward' is nearer than a dream.

"I do not believe the time is distant when the evils resulting from this assumption of a power on the part of government to determine the compensation a man may receive for the use of his property will become apparent and I hope that the courts will hasten to declare that government can prescribe compensation only when it grants a special privilege, as in the creation of a corporation, or when the service rendered is a public service, or the property is in fact devoted to a public use."

## OBITUARY

William F. Hunting of the Hunting Elevator Company of McGregor, Ia., died of heart disease April 28. He was for many years a partner of Diamond Jo Reynolds in the grain trade. The Hunting Elevator Company operated about 150 houses in Iowa, Minnesota and Dakota. He was born on Long Island, N. Y., sixty-four years ago, and at the time of his death owned property valued at \$500,000.

The steamship *Conemaugh* sailed from Philadelphia April 22 with 6,000,000 pounds of flour and 88,000 pounds of rice for the famine-stricken peasants of Russia.

Convict labor will be employed in making grain bags at the jut mill of the Washington State Prison as soon as the prisoners have become expert in the use of the new machinery recently installed.

A grain of wheat drove insane Augustus Colcaunon of Sodom, Ind. The grain had been forced into his head by a fall, and sprouting, caused such a pressure on the matter composing the brain that he lost his reason.

## Latest Decisions.

### Failure of Charterer to Load Full Cargo.

The failure of a charterer to load a full cargo on a vessel before she was obliged to leave to reach another port, where she had contracted to be ready to deliver by a certain date, will not be excused on account of the incapacity of the master when the receipt of cargo and management of the vessel were in the hands of a competent person, and failure to load from the charterer's lack of expedition.—*McQuade vs. McNaughton*, United States District Court, Pennsylvania, 49 Fed. Rep.

### Effect on Insurance of Execution of Chattel Mortgage on Firm Property for Individual Debt.

The execution of a chattel mortgage on partnership property by one of the partners to secure his individual debt works a change of "interest" in the property, within the meaning of a policy of insurance placed thereon by the partnership, which provides that the policy shall become void, if any change, other than by death of the insured, takes place in the "interest, title or possession" of the property insured.—*Glenny vs. German Ins. Co.*, Supreme Court of Michigan, 39 N. W. Rep.

### Recovery of Freight Overcharge Penalty.

Where a statute provides that penalties for overcharge on freight shall not be recoverable unless the party aggrieved shall give notice thereof in writing "to the railroad company or to the agent demanding or receiving the same," a notice which was delivered to the successor of the local agent who received overcharge, and which failed to give data from which the record of the shipment could be found on the company's books, was sufficient.—*Sabine & E. T. Ry. Co. vs. Cruse*, Supreme Court of Texas, 18 S. W. Rep.

### Taxation of Trade.

A statute which provides that every "merchant, jeweler, grocer, druggist, or other dealer" who shall buy and sell goods not specially taxed elsewhere in the act shall, in addition to the tax on his stock, pay a license tax "on the total amount of his purchases in or out of the state," except purchases of farm products from the producer, is not repugnant to the constitution, where that contains a clause providing that the general assembly may tax trades, professions and franchises.—*State vs. French*, Supreme Court of North Carolina, 14 S. E. Rep.

### Validity of Written Contract Fraudulently Secured.

When one of two contracting parties is fraudulently induced to execute a written instrument upon the false representation that it expresses the agreement which they had made, the party defrauded may defend against the enforcement of the fraudulent instrument by the other party, even though he may be chargeable with want of prudence in relying upon the false representations. This defense may also be made when a third party, for whose benefit the contract was made, seeks to enforce it.—*Maxfield vs. Schwartz*, Supreme Court of Minnesota, 47 N. W. Rep.

### Marine Insurance—Unavoidable Dangers.

The Kentucky Court of Appeals held, in the recent case of the *Louisville Underwriters vs. Fence*, that where a policy insures against the perils of the sea or river, the mere neglect of those in charge of the vessel will not free the insurer of liability, and that this rule applies, although the policy insures against the "unavoidable dangers" of the rivers, as such a provision relates to the peril embraced by the policy, and not to the skill or care to be exercised by the master of the boat. The court held in this case that although a boat was stranded through the negligence of the master in making a landing when the river, which was out of its banks, was falling rapidly, the loss resulting was covered by a policy insuring against "the unavoidable dangers of the river."

### Elevator Regulation Held Constitutional.

An action brought some time ago to test the constitutionality of the public warehouse law of North Dakota, passed last year, has been decided by the Supreme Court of the state. The act in question provided that all persons and corporations who operated elevators, warehouses, etc., for profit be declared to be public warehouses, and that all public warehouses should not charge more than 2 cents per bushel for the usual services rendered by such institutions. A decision in favor of the law was rendered in the trial court, and this has been affirmed by the Supreme Court (*State ex rel. Stoesser vs. Brass*). The court held Sections 4 and 11 of the law to be constitutional in so far as they define public warehouses, and in so far as they prescribe maximum rates of charges for elevating and storing grain in the public warehouses, as they are defined in Section 4 of the act, but held further that the record did not raise the question of the adequacy of the rate of charges fixed by Section 11 of the act, and hence that the case was not one which called for the decision of the point whether the

court would in any case assume to review a rate of charges established by the legislature where it was shown that such rate was ruinously small or non-compensatory.

### Interstate Commerce—Limitations.

An action was recently brought against a railroad company under the Interstate Commerce Law to recover the amount of freight paid by the plaintiff to the defendant company in excess of that paid to it by others for similar services. The defendant company interposed the plea of the statute of limitations, the Louisiana statute requiring actions for damages resulting from offenses or quasi offenses to be brought within one year. The question was whether the state statute of limitations applied to the case, and whether the action of the company complained of came within the class of quasi offenses. Both questions were decided in the affirmative by Judge Billings of the United States Circuit Court at New Orleans, in the case of *Copp vs. Louisville & Nashville Railroad Company*.

### Telegraph Company's Liability.

The following rulings regarding the liability of telegraph companies for negligence in failing to deliver telegrams were made by the Appellate Court of Indiana in the case of *Western Union Telegraph Company vs. Newhouse*, viz.: That telegraph companies, while not strictly common carriers, and therefore not subject to the same severe rules of responsibility, yet are to be held to a high degree of diligence, skill and care, and are responsible for any negligence or unfaithfulness in the transmission and delivery of messages; that ordinarily the specification in the address of a message of some place for delivery is by way of assistance in making a personal delivery, and the company is not necessarily absolved by such designation of place from making further effort to find the person addressed, and it may be negligence to fail to do so.

### Acceptance of Check by Telegram.

One T., having purchased certain cattle for \$22,000, offered his check in payment. The seller refused to accept it or part with the cattle until assured it would be paid, and therefore telegraphed the bank, asking if it would pay T.'s check for \$22,000. The bank answered: "It is good; send on your paper." This was an acceptance in writing, within the meaning of a statute, providing that no person shall be charged as an acceptor of a deal of exchange unless his acceptance shall be in writing. A bank which has agreed to accept a check for a certain sum cannot refuse paying because the check when presented concluded with the words "with exchange," no place of exchange being mentioned, since this is mere surplusage and of no effect.—*Garretson vs. North Atchison Bank*, United States Circuit Court, Missouri, 47 Fed. Rep.

### Interstate Commission Decision.

A decision of importance to Pacific coast traffic interests has been rendered by the Interstate Commerce Commission in a matter submitted to it by the Merchants' Union of San Bernardino, Cal. For years it has been the custom of the railroads to enforce a scale known as the intermediate rate upon all goods shipped to interior points in California. For instance a merchant shipping goods from Chicago to a point 200 miles inland from the Pacific coast in California would have to pay a rate equal to the full rate to the terminal on the coast plus the local rate from the coast to the point of destination. This discrimination has been regarded as a peculiar hardship by the inland business interests for some time, but they had not been able to secure any concessions. On the part of the railroads it was claimed that the ocean traffic controlled the rates, and that the tolls on terminal freight were much lower than they ought to be. Finally the matter was laid before the Interstate Commission, with the result that a decision was handed down declaring the discrimination illegal, and requiring the railroads to concede a pro rata scale.

## PERSONAL

David Litten, the grain dealer of Brookville, O., has departed on a tour to Europe where he will combine business with pleasure.

John Eberhart, a prominent grain dealer of Shelbyville, Ind., was married to Miss Anna Benton on April 20 at the residence of the bride's uncle.

William D. Sammis, secretary of the Mulford Elevator Company at Minneapolis, Minn., was recently married to Miss Jessie Lee Brown at the First Presbyterian Church in Minneapolis.

Grain rates from interior points in Illinois were not reduced to the 20-cent basis by the Western lines at their meeting in Chicago May 5. The 23-cent rate continues Eastward from the Mississippi River almost to Chicago.



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CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains sixteen tables, and is neatly bound in leatherette. Price.....\$1.50

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## Miscellaneous \* \* \* \* Notices.

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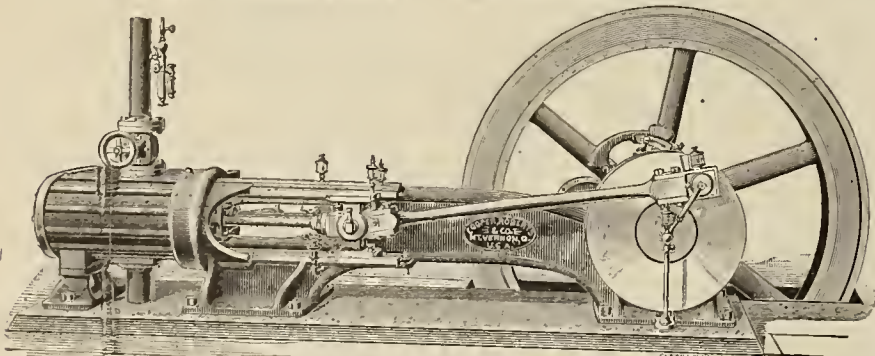
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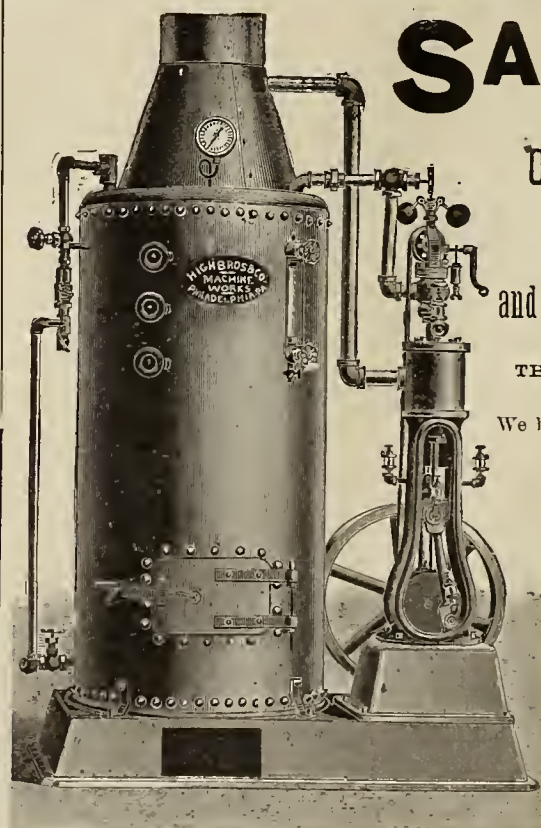
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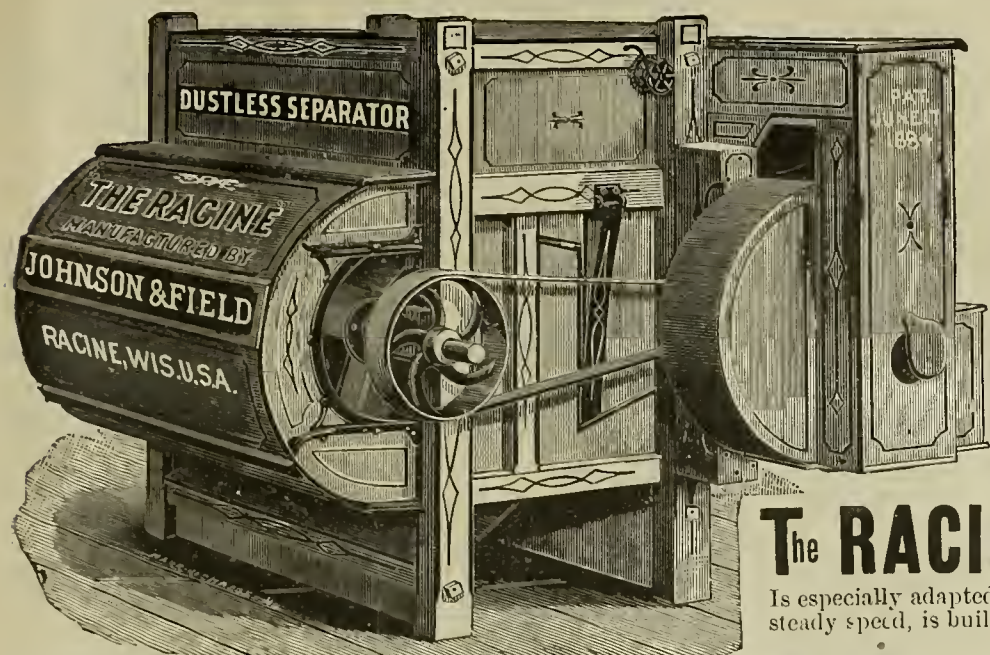
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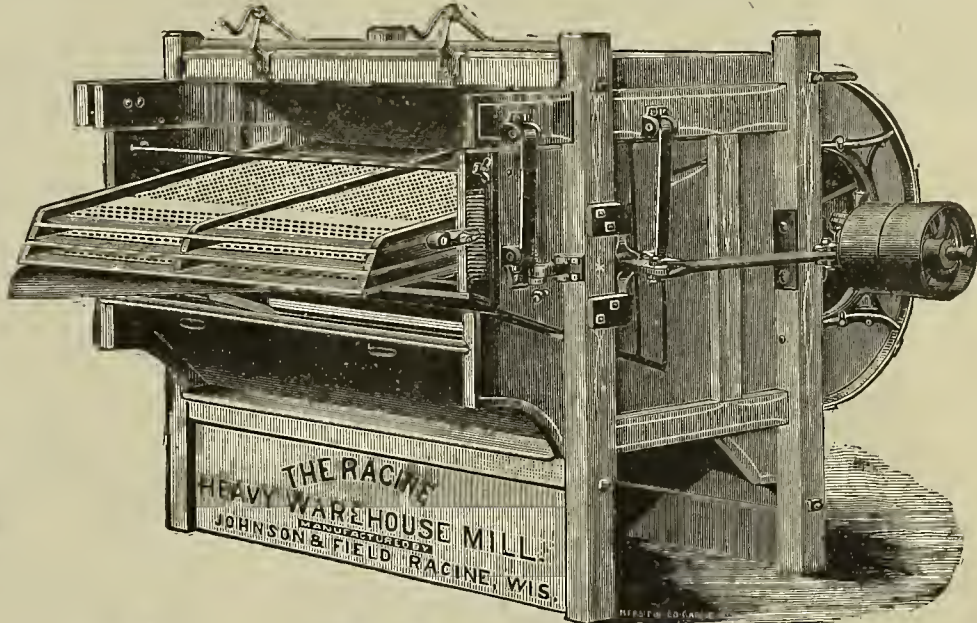
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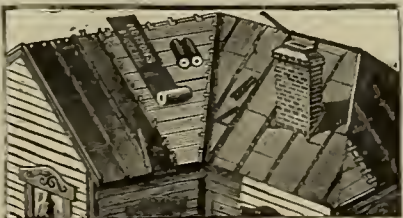
### REFERENCES:

P. G. Noel, Topeka, Kan.  
The Topeka Mill & Elevator Co., Topeka, Kan.  
B. Fowler & Co., Chicago, Ill.  
H. C. Cole & Co., Chester, Ill.  
Thompson & Cutsinger, Edinburg, Ind.  
Pinckneyville Milling Co., Pinckneyville, Ill.

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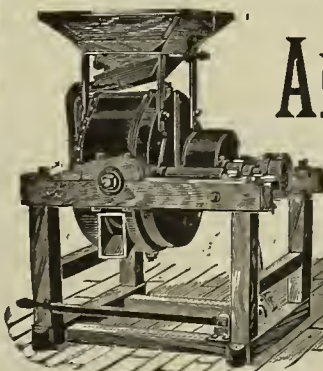
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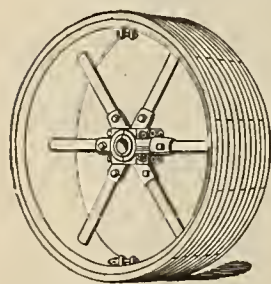
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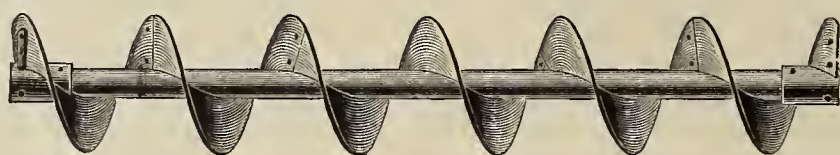


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Will Not Slip on  
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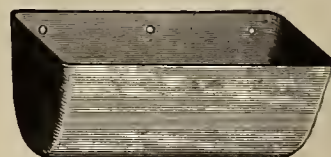


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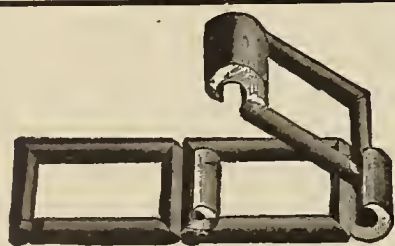
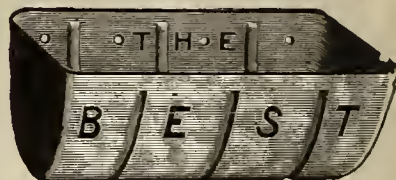
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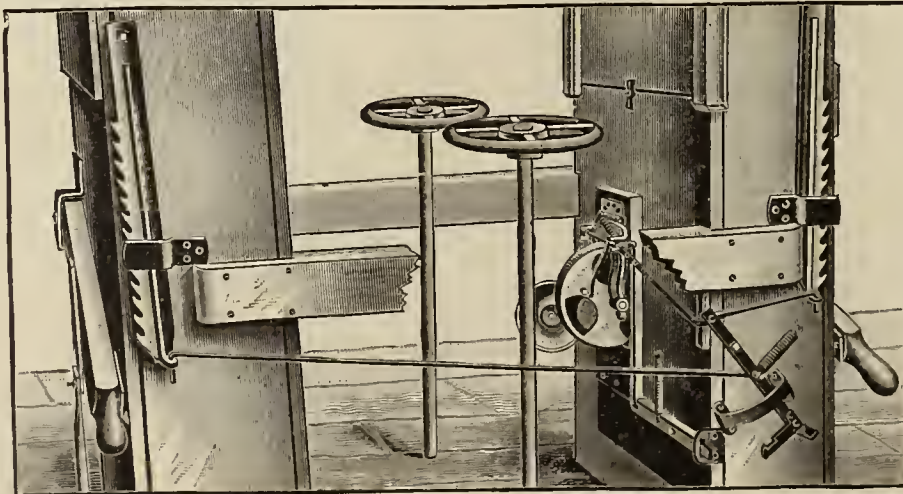
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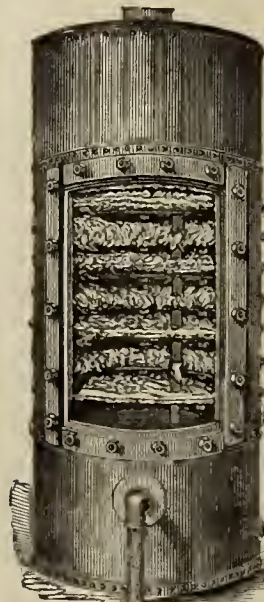
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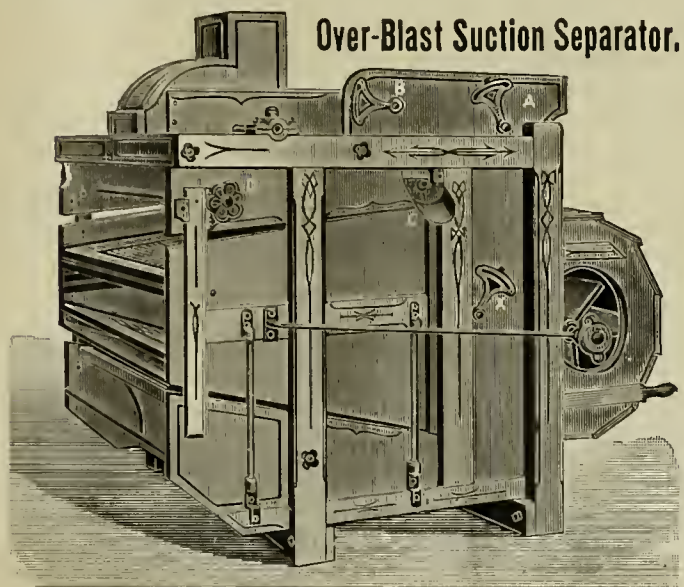


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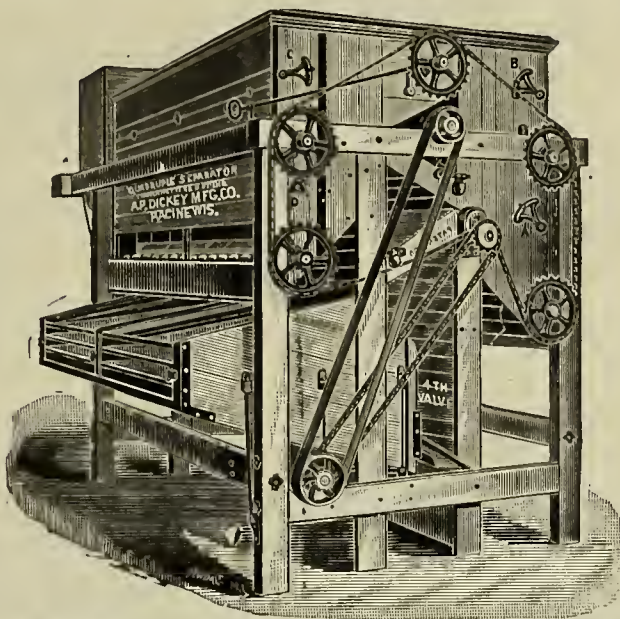
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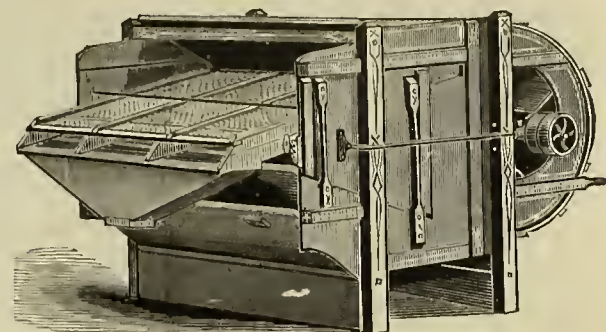
Over-Blast Suction Separator.



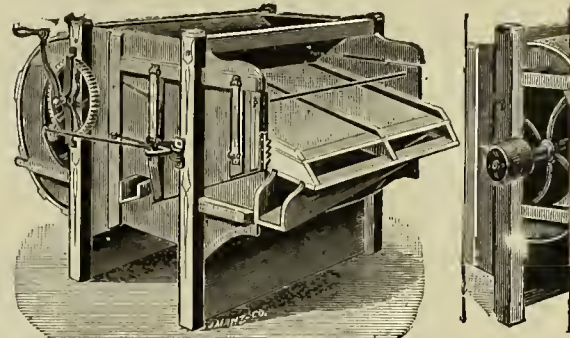
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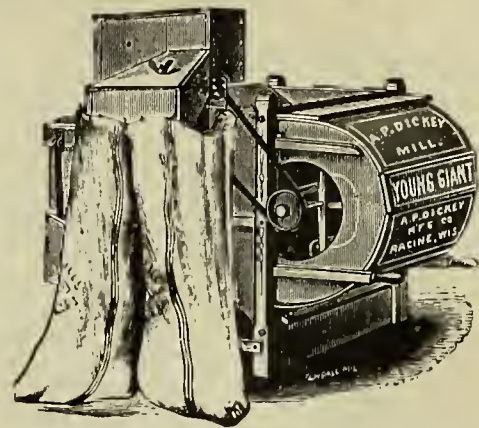
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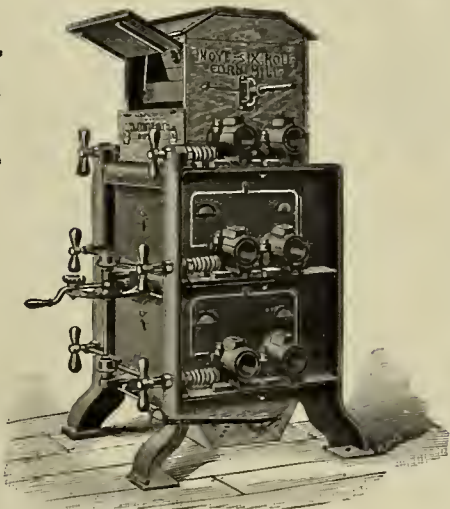


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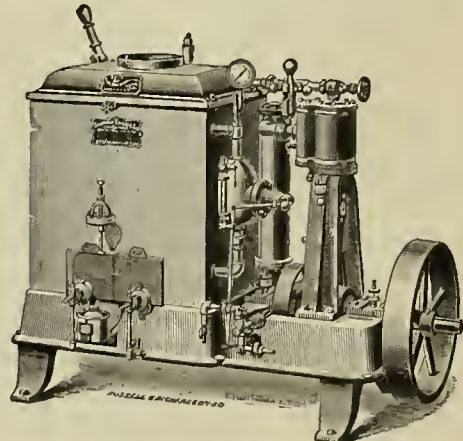
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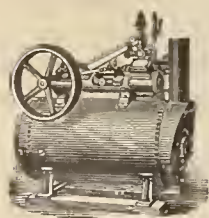
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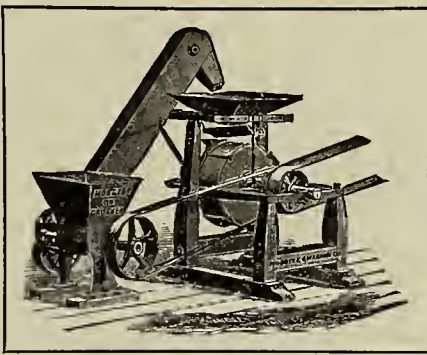
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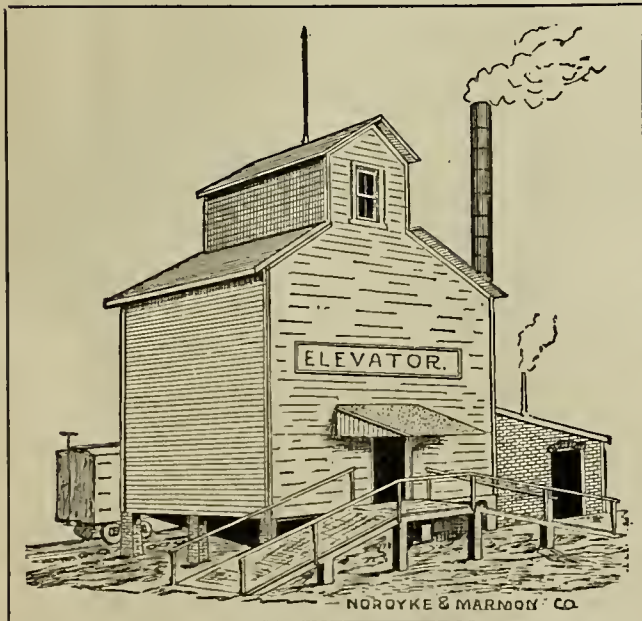


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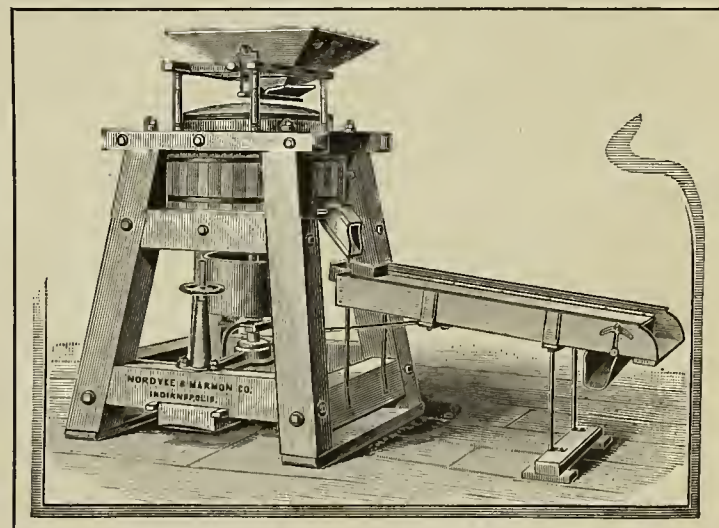


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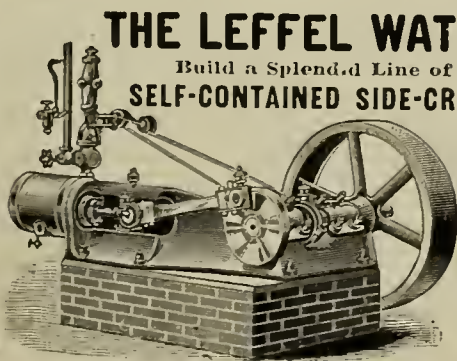
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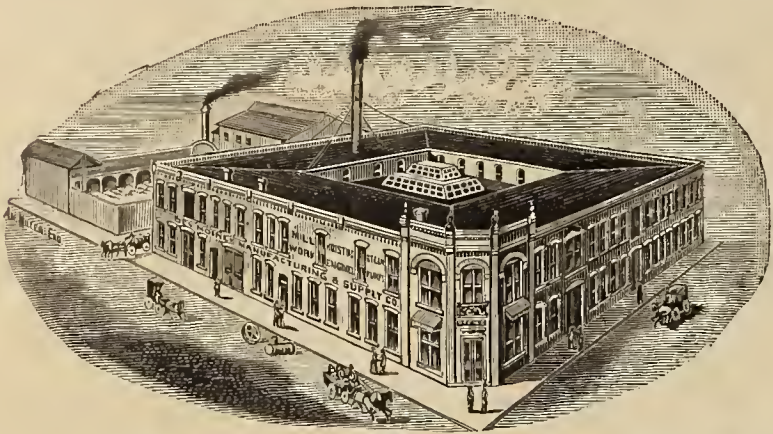
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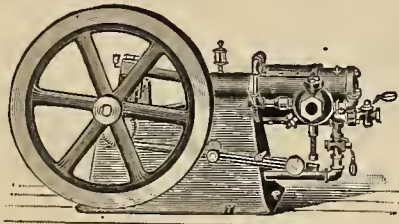
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By the Graham & Morton Company's elegant Steel, Side-Wheel Steamer "City of Chicago" and the new Propeller "Chicora" (first season in service).

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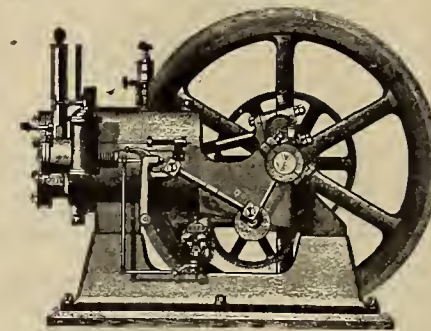
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PORTABLE STEEL

## ELEVATOR and WAGON DUMP.

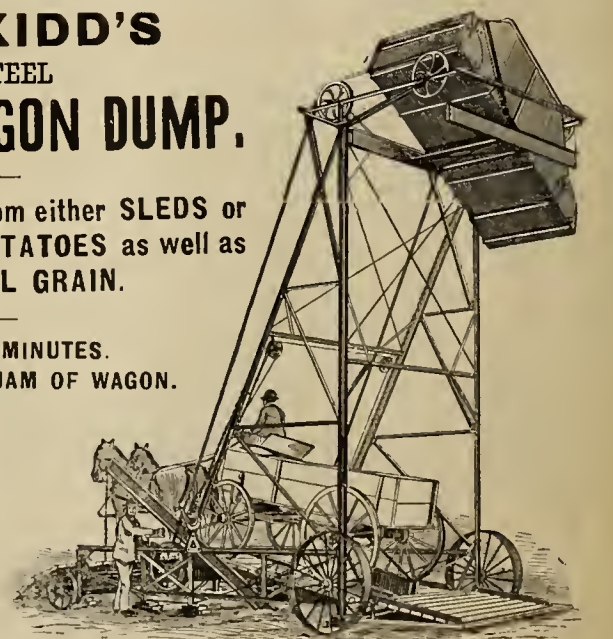
For Dumping or Elevating from either SLEDS or WAGONS EAR CORN or POTATOES as well as any kind of SMALL GRAIN.

Dumps and elevates a load in TWO MINUTES.

NO JERK ON HORSE OR JAM OF WAGON.

Farmers rather elevate their loads on this machine than pull up grades or dump on the old style dumps.

CANADIAN PATENT FOR SALE.



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DEAR SIR:—We dumped 70,000 bushels of oats into our buildings in the season of 1890. Last July we set the dump beside the track and loaded the 70,000 bushels of oats into cars with it. Since then we have handled or loaded into cars about 15,000 bushels of corn, and are now filling our buildings with oats. The machine works in every way as well as last year, and better, for the reason we are more used to it. It works just as well in loading cars as it does in filling the buildings. It saved us five (\$5.00) dollars per day loading our oats into cars. We could hardly fill our buildings the old way, by having men to shovel them in and men inside to keep them away. We think the machine as near perfection as one can be made. We can dump twenty loads per hour, and if crowded, we can dump twenty-five or thirty loads per hour. No waste of grain and no trouble in any way.

Yours, COY & CASS.

For Full Particulars Address

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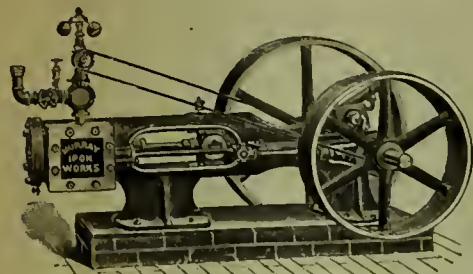


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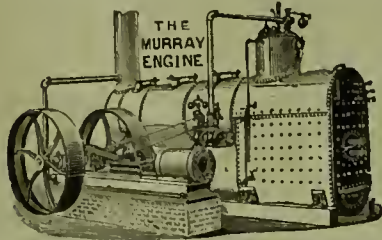
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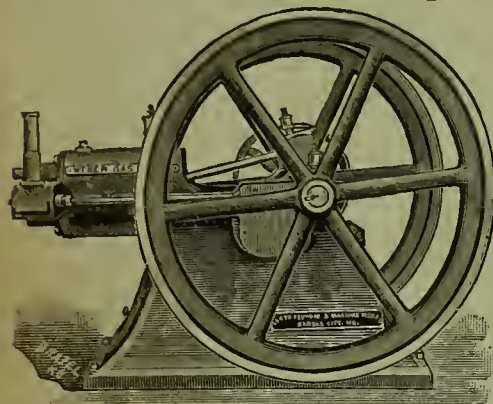
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PLATTE CITY, Mo., Sept. 12, 1891.  
Weber Gas Engine Works, Kansas City, Mo.  
GENTLEMEN:—In answer to your inquiry as to how we are pleased with the No. 4 power Weber Gasoline Engine in our Elevator at Camden Point, Mo., we will say we are well pleased, and have been from the first. It runs three sets of elevators, with a lifting capacity of 350 bushels each, two for wheat and one for screenings, 110 feet of conveyor, and one No. 1 "Western Separator." We receive wheat at end of building, convey 60 feet, raise 50 feet, drop to separator, and from separator to second set of elevators, raise again 50 feet, and convey to bins 50 feet. Equal to 700 bushels per hour, by double elevation at one time, at a cost of 10 cents (one gallon of gasoline). We find the greatest saving over steam to be on days we have the least work to do. We have started up, taken in, cleaned and put away one hundred bushels of wheat for five cents, actual cost of power. We find the Engine simple and easily run. One man does all our work, receiving, paying and cleaning wheat, and attends the engine. We cannot say too much in its praise for elevator purposes. Our insurance is 2 per cent., same as steam rate, which, we think, when understood, will be considerably less. Certainly the danger from fire is not near so great.  
Very truly yours, J. W. MAGEE, Manager.

WEBER GAS ENGINE WORKS, - KANSAS CITY, MO.

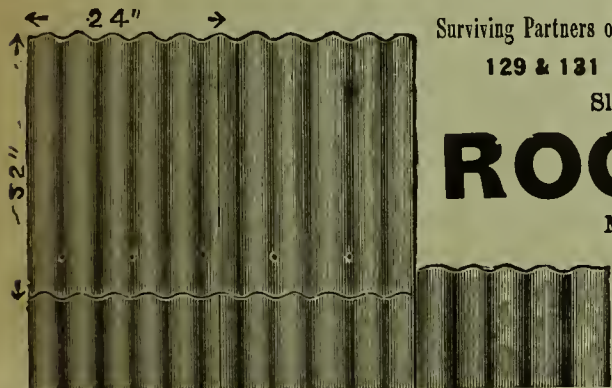
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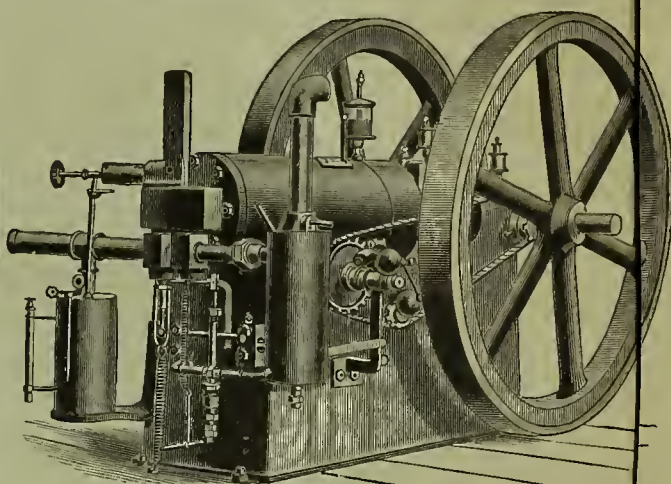
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No Lost Time.

Economical.  
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The most perfect and desirable motor for Grain Elevators, Feed Mills, Dynamos, Ventilating Fans. Made in sizes ranging from 1 to 20 H. P.

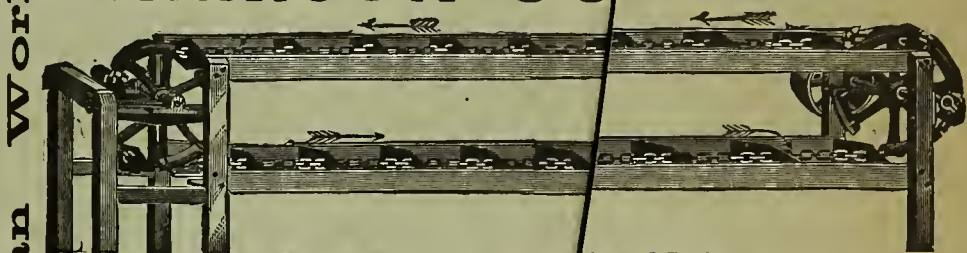
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IT CARRIES Grain, Seeds, Ear Corn, Wet or Dry Malt, Coal, Sand, Sawdust, Tan Bark, Stone, Cinders, Clay, Paper Pulp, Cotton Seed, Etc., Etc.

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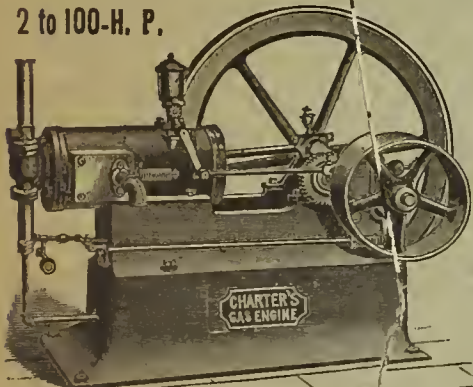
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Dallas Elevator Co., Dallas, Texas, 750,000 bushels.  
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